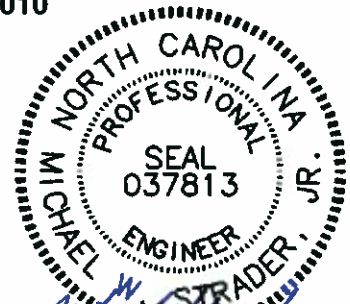




SINCE 1959

**PROJECT MANUAL
for
HYDE COUNTY (FY 09 CDBG)
LAKE SWAMP ROAD
WATER AND SEWER FORCE MAIN EXTENSIONS
Engelhard, Hyde County, North Carolina
Re: NCDENR PWSS Water System No. 04-48-010
NCDENR DWQ Permit No. WQ0035444**



Prepared For:

Hyde County
P.O. Box 66
Swan Quarter, North Carolina 27885
(252) 926-4468

and

Engelhard Sanitary District
P.O. Box 579
Engelhard, North Carolina 27828

Prepared By:

Quible & Associates, P.C.
Engineering * Environmental Sciences * Planning * Surveying
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Project Number 09052
July 7, 2011

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Section 00100
Advertisement for Bids

Hyde County (FY 09 CDBG) Lake Swamp Road
Engelhard, Hyde County, North Carolina

Sealed bids will be received by Hyde County in the Manager's Office located at 30 Oyster Creek Road, Swan Quarter, North Carolina until 2:00 P.M., local prevailing time, Wednesday, August 10, 2011, and immediately thereafter publicly opened and read for the furnishing of labor, material, equipment and entering into the construction of the Hyde County (FY 09 CDBG) Lake Swamp Road project.

The project consists, but is not limited to, the following work:

- Installation of approximately 1,835 lf of 6-inch diameter potable water supply line extension, two post type hydrants, service laterals, and all related appurtenances.
- Installation of approximately 1,500 lf of 2-inch diameter sanitary force main extension, six 1,000 gallon septic tanks with simplex pumps, service laterals, and all related appurtenances.

The County will award the contract based on the lowest responsible bid as determined by the cumulative total lump sum bid.

Bid documents consisting of a project manual and drawings are open to the public for inspection at the following locations:

- Hyde County Manager's Office, 30 Oyster Creek Road, Swan Quarter, NC 27885
- Quible & Associates, P.C., 8 Juniper Trail, Southern Shores, NC 27949
- Associated General Contractors (AGC) Plan Room in Raleigh Service Center, Caswell Building, Glenwood Place, 3700 National Dr., Suite 201, Raleigh, NC 27612-4859

A pre-bid conference will be held at 10:00 A.M. on Tuesday, July 26, 2011 in the Hyde County Manager's Office located at 30 Oyster Creek Road, Swan Quarter, NC.

Copies of Bid documents may be obtained from Quible & Associates, P.C. at 252-261-3300 upon receipt of a nonrefundable payment of \$125.00 for each set. Only complete sets will be issued.

Send nonrefundable payments to Quible & Associates, P.C., P.O. Drawer 870 Kitty Hawk, NC 27949. Faxed checks are not acceptable. Please include complete street address with zip code for use by express delivery agencies, as well as complete mailing address with zip code to avoid delay in receiving transmittals. In addition, please include telephone and fax numbers with area code, and e-mail address.

Bid Security: Bids shall be accompanied by a certified check or an acceptable bid bond in the amount of 5 percent of the base bid.

Bidders are hereby notified that they must have proper license under the State laws governing their respective trades.

General Contractors are notified that Chapter 87, Article 1, General Statutes of North Carolina, will be observed in receiving and awarding general contracts.

Owner:
Hyde County
Attention: Ms. Kris Noble
P.O. Box 188
30 Oyster Creek Road
Swan Quarter, NC 27885

End of Advertisement

Instructions to Bidders

ARTICLE 1 - DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. Bidder - The individual or entity who submits a Bid directly to the Owner.
 - B. Issuing Office - The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered. The issuing office is:

Quible & Associates, P.C.
8 Juniper Trail
P.O. Drawer 870
Kitty Hawk, NC 27949
252-261-3300
 - C. Successful Bidder - The lowest responsible Bidder submitting a responsive Bid to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award.

ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the Advertisement or Invitation to Bid may be obtained from the Issuing Office. The deposit is nonrefundable.
- 2.02 Complete sets of Bidding Documents must be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

ARTICLE 3 - QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, within five days of Owner's request, Bidder shall submit written evidence such as financial data, previous experience, present commitments, and such other data as may be requested by the Owner.
- 3.02 Bidders are notified that Chapter 87, Article(s) 1, 2, & 4 of the General Statutes of North Carolina, will be observed in receiving and awarding contracts. Bidders for this Project must be licensed in the following classifications and limitations:
- A. General: Must have a General Contractors license with one of the following classifications with a limitation appropriate to the bid amount.
 - 1. Classifications:
 - a. Unclassified
 - b. Public Utilities Contractor
 - c. Public Utilities (Water Lines and Sewer Lines)
 - d. Highway

2. Limitations:
 - a. "Limited": Up to \$500,000
 - b. "Intermediate": Up to \$1,000,000
 - c. "Unlimited": No limit on contract value

ARTICLE 4 - EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.01 Subsurface and Physical Conditions

A. The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Bidding Documents.
2. Those drawings of physical conditions in or relating to existing surface and subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Bidding Documents.

B. Copies of reports and drawings referenced in paragraph 4.01.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in paragraph 4.02 of the General Conditions has been identified and established in paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.02 Underground Facilities

A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

4.03 Hazardous Environmental Condition

A. The Supplementary Conditions identify those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that ENGINEER has used in preparing the Bidding Documents.

B. Copies of reports and drawings referenced in paragraph 4.03.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in paragraph 4.06 of the General Conditions has been identified and established in paragraph 4.06 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

- 4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in paragraph 4.06 of the General Conditions.

Before submitting a Bid each Bidder will be responsible to obtain such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise, which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Bidder and safety precautions and programs incident thereto or which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of the Contract Documents.

4.05 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

4.06 Reference is made to Article 7 of the General Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work for which a Bid is to be submitted. On request, Owner will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.

4.07 It is responsibility of each Bidder before submitting a Bid to:

A. Examine and carefully study the Bidding Documents, the other related data identified in the Bidding Documents, and any Addenda;

B. Visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. Become familiar with and satisfy Bidder as to all Federal, State, and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work;

D. Carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of Hazardous Environmental Conditions at the Site which have been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions;

E. Obtain and carefully study (or accept consequences for not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;

F. Agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;

G. Become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;

H. Correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;

I. Promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and

J. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

- 4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 - PRE-BID CONFERENCE

- 5.01 A pre-Bid conference will be held as indicated in the Advertisement, or by Addendum. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

ARTICLE 6 - SITE AND OTHER AREAS

- 6.01 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

ARTICLE 7 - INTERPRETATIONS AND ADDENDA

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

ARTICLE 8 - BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of five percent (5 %) of Bidder's maximum Bid price and in the form of a certified check or a Bid bond (on the form attached, if a form is prescribed) issued by a surety meeting the requirements of paragraphs 5.01 and 5.02 of the General Conditions.

- 8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Agreement or the sixty-one (61) days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.
- 8.03 Bid security of other Bidders whom OWNER believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening, if requested by Bidder.

ARTICLE 9 - CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 - LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

ARTICLE 11 - SUBSTITUTE AND "OR-EQUAL" ITEMS

- 11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or "or-equal" materials and equipment as defined in paragraph 6.05 of the General Conditions, or those substitute materials and equipment approved by the Engineer and identified by Addendum. The materials and equipment described in the Bidding Documents establish a standard of required type, function and quality to be met by any proposed substitute or "or-equal" item. Request for Engineer's clarification of materials and equipment considered "or-equal" prior to the Effective Date of the Agreement must be received by the Engineer at least 15 days prior to the date for receipt of Bids. No item of material or equipment will be considered by Engineer as a substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each request shall conform to the requirements of paragraph 6.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon the Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any proposed substitute item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

ARTICLE 12 - SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, without an increase in the Bid.

- 12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest responsible Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner and Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in paragraph 6.06 of the General Conditions.
- 12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.
- 12.04 The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 6.06.

ARTICLE 13 - PREPARATION OF BID

- 13.01 The Bid form is included with the Bidding Documents. Additional copies may be obtained from Engineer.
- 13.02 All blanks on the Bid form shall be completed by printing in ink or by typewriter and the Bid signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each Bid item, alternative, adjustment unit price item, and unit price item listed therein, or the words "No Bid," "No Change," or "Not Applicable" entered.
- 13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporation business address and state of incorporation shall be provided on the Bid Form.
- 13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The business address of the partnership shall be provided on the Bid Form.
- 13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the business address of the firm must be provided on the Bid Form.
- 13.06 A Bid by an individual shall show the Bidder's name and business address.
- 13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid form. The business address of the joint venture must be provided on the Bid Form.
- 13.08 All names shall be typed or printed in ink below the signatures.
- 13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers and dates of which shall be filled in on the Bid form.
- 13.10 The address and telephone number for communication regarding the Bid shall be shown.
- 13.11 The Bid shall include the initial construction stakeout fee as described in Paragraph 1.17.1 in Section 01400-General Requirements.
- 13.12 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract. Bidder's state contractor license number for the state of the Project, if any, shall also be shown on the Bid Form.

ARTICLE 14 - BASIS OF BID; COMPARSION OF BIDS

- 14.01 Lump Sum
A. Bidders shall submit a Bid on a lump sum basis as set forth in the Bid Form.
- 14.02 The Bid price shall include such amounts as the Bidder deems proper for overhead and profit on account of cash allowances, if any, named in the Contract Documents as provided in paragraph 11.02 of the General Conditions.

ARTICLE 15 - SUBMITTAL OF BID

- 15.01 Each prospective Bidder is furnished one bound copy of the Bidding Documents. If provided by the Engineer an unbound copy of the Bid Form may be completed and submitted with the Bid security and all other required data.
- 15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque sealed envelope plainly marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED." When using the mail or other delivery system, the Bidder is totally responsible for the mail or other delivery system delivering the Bid at the place and prior to the time indicated in the Advertisement or Invitation to Bid. A mailed Bid shall be addressed to Owner at address in Article 1.01 of Bid Form.

ARTICLE 16 - MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.
- 16.02 If within twenty-four (24) hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid or negotiated, that Bidder will be disqualified from further bidding on the Work. This provision to withdraw a Bid without forfeiting the Bid security does not apply to Bidder's errors in judgment in preparing the Bid.

ARTICLE 17 - OPENING OF BIDS

- 17.01 Bids will be opened at the time and place indicated in the Advertisement or Invitation to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but the Owner may, in its sole discretion, release any Bid and return the Bid security prior.

ARTICLE 19 - EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation the rights to reject any and all nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsive. Owner may also reject the Bid of any Bidder if Owner believes

that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

- 19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- 19.03 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 19.04 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.
- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.
- 19.06 If the Contract is to be awarded, Owner will award the Contract to the responsible Bidder whose Bid, conforming with all the material terms and conditions of the Instructions to Bidders, is lowest, price and other factors considered.
- 19.07 In his evaluation for making an award, the Owner may consider any of the Alternate Bids that he deems to be in his best interest. Any of the Alternate Bids may be utilized by the Owner at any time during the life of the Contract, regardless of whether or not the award was based upon the same.
- 19.08 The Owner reserves the right to award any or all parts of a Contract but separate parts of the same Contract will not be awarded to different Contractors.
- 19.09 If the Contract is to be awarded, Owner will award the Contract to the Bidder whose Bid is in the best interest of the Project.

ARTICLE 20 - CONTRACT SECURITY AND INSURANCE

- 20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by such bonds.

ARTICLE 21 - SIGNING OF AGREEMENT

- 21.01 When Owner gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

ARTICLE 22 - SALES AND USE TAX

- 22.01 Refer to paragraph 14.02A of the Supplementary Conditions for Owner's requirements on sales tax reports.

ARTICLE 23 – RETAINAGE

- 23.01 Provisions concerning Contractor's rights to deposit securities in lieu of retainage are set forth in the Agreement.

End of Instructions to Bidders

Bid Form

Project Identification: Hyde County (FY 09 CDBG) Lake Swamp Road
Engelhard, Hyde County, North Carolina

Contract Identification and Number: 09052

ARTICLE 1 - BID RECIPIENT

1.01 This Bid Is Submitted To:

Hyde County
Attention: Ms. Kris Noble
P.O. Box 188
30 Oyster Creek Road
Swan Quarter, NC 27885

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in the Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

2.01 Bidder accepts all of the terms and conditions of the Advertisement and Instructions to Bidders, including without limitations those dealing with the dispositions of Bid security. The Bid will remain subject to acceptance for ninety (90) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged.

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all Federal, State, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a Hazard Environmental Condition, if any, which has been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions.

E. Bidder has obtained and carefully studied (or accepts the consequences for not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by the Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of the Work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.

I. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

K. Bidder will submit written evidence of its authority to do business in the state where the Project is located not later than the date of its execution of the Agreement.

ARTICLE 4 - FURTHER REPRESENTATIONS

4.01 Bidder further represents that:

A. This Bid is genuine and not made in the interest of or on the behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

ARTICLE 5 - BASIS OF BID

5.01 Bidder will complete the work in strict accordance with the Contract Documents prepared by Quible & Associates, P.C. Engineering • Environmental Sciences • Planning • Surveying, dated June 3, 2011, together with addenda numbered _____, issued during bidding period and hereby acknowledged, subject to the terms and conditions of the Agreement for the following price(s):

Base Bid Item No. 1 is defined as all work associated with the construction of water lines, hydrants, service laterals, and appurtenances shown in this project for the sum of _____ dollars (\$_____).

Base Bid Item No. 2 is defined as all work associated with the construction of sanitary sewer force mains, service laterals, and appurtenances shown in this project with the exception of items included in Base Bid Item No. 3 for the sum of _____ dollars (\$_____).

Base Bid Item No. 3 is defined as all work associated with the construction of six (6) septic tanks and associated pumping equipment as specified on the drawings and specifications for the unit cost of _____ dollars (\$_____) each for a total Base Bid Item No. 3 amount of the sum of _____ dollars (\$_____).

Total Base Bid (Item Nos. 1-3):

_____ dollars
(\$_____).

Notes:

- a) The basis of award for determining the low bidder shall be the Total Base Bid.
- b) The Base Bid items are founded upon furnishing equipment and materials of specified manufacturers.
- c) Base Bid Item No. 1 includes the water service line, meter box, and all appurtenances indicated on the drawings and specifications with the exception of the water meter (to be provided by the Owner).
- d) Base Bid Item Nos. 2 and 3 include the sewer laterals, associated cleanouts, and septic tank and pumping equipment indicated on the drawings and specifications.
- e) All mobilization for the project shall be included.
- f) It is understood and agreed that the Owner, in protecting his best interest, reserves the right to reject any or all bids.

ARTICLE 6 - TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with paragraph 14.07.B of the General Conditions on or before the date(s) specified in the Notice to Proceed, or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the work within the times specified above, which shall be stated in the Agreement.

ARTICLE 7 - ATTACHMENTS TO THIS BID

- 7.01 The following documents are attached to and made a condition of the Bid:
 - A. Required Bid Security in the form of a Bid Bond or Certified Check (circle type of security provided);
 - B. Minority Business Participation/Recruitment Forms, MB-1, 2, and 3.

7.02 The following documents shall be submitted by the apparent lowest, responsive bidder within 72 hours after the Bid Opening.

A. Minority Business Participation/Recruitment Forms, MB-4 and MB-5.

ARTICLE 8 - DEFINED TERMS

8.01 The terms used in this Bid with the initial capitol letters have the meanings indicated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 - BID SUBMITTAL

9.01 This Bid submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

SEAL,
if required
by State

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

SEAL,
if required
by State

By: _____
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name: _____

State of Incorporation: _____

Type (General Business, Profession, Service, Limited Liability): _____

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Attest _____
(Signature of Corporate Secretary)

CORPORATE
SEAL,
if required
by State

Date of Qualification to do business in Virginia is ____/____/____

A Joint Venture

Name of Joint Venture: _____

First Joint Venture Name: _____

By: _____
(Signature of joint venture partner -- attach evidence of authority to sign)

SEAL,
if required
by State

Name (typed or printed): _____

Title: _____

Second Joint Venture Name: _____

By: _____
(Signature of joint venture partner -- attach evidence of authority to sign)

SEAL,
if required
by State

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is party to the venture should be in the manner indicated above.)

Bidder's Business address:

Business Phone No. (____) _____

Business FAX No. (____) _____

Business E-Mail Address _____

State Contractor License No. _____. (If applicable)

Employer's Tax ID No. _____

Phone and FAX Numbers, and Address for receipt of official communications, if different from
Business contact information:

9.02 Bid submitted on _____, 20__.

BID BOND

Any singular reference to Bidder, Surety, Owner, or other party shall be considered plural where applicable.

BIDDER (Name and Address): _____

SURETY (Name and Address of Principal Place of Business): _____

OWNER (Name and Address): _____

BID

Bid Due Date: _____

Project (Brief Description Including Location): _____

BOND

Bond Number: _____

Date (Not later than Bid due date): _____

Penal sum _____

(Words)

(Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER**SURETY**

(Seal
)

(Seal)

Bidder's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____
Signature and Title

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title

Attest: _____
Signature and Title

Note: Above addresses are to be used for giving required notice.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Surety's liability.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

- 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
- 3.2. All Bids are rejected by Owner, or
- 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

State of North Carolina AFFIDAVIT A – Listing of Good Faith Efforts

County of _____

(Name of Bidder)

Affidavit of _____

I have made a good faith effort to comply under the following areas checked:

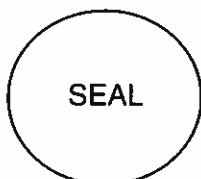
Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- ☐ **1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- ☐ **2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- ☐ **3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- ☐ **4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- ☐ **5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- ☐ **6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- ☐ **7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- ☐ **8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- ☐ **9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- ☐ **10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____
 Signature: _____
 Title: _____



State of _____, County of _____
 Subscribed and sworn to before me this _____ day of _____ 20____
 Notary Public _____
 My commission expires _____

State of North Carolina --AFFIDAVIT B-- Intent to Perform Contract with Own Workforce.

County of _____

Affidavit of _____

(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____

_____ contract.

(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

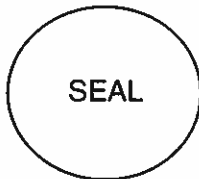
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement. The Bidder agrees to make a Good Faith Effort to utilize minority suppliers where possible.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20__

Notary Public _____

My commission expires _____

State of North Carolina - AFFIDAVIT C - Portion of the Work to be Performed by HUB Certified/Minority Businesses

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by HUB certified/minority businesses as defined in GS143-128.2(g) and 128.4(a),(b),(e) is equal to or greater than 10% of the bidders total contract price, then the bidder must complete this affidavit.
This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the _____
(Name of Bidder)

(Project Name)
Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. Attach additional sheets if required

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

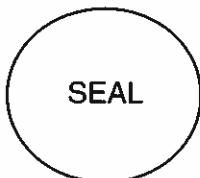
*Minority categories: Black, African American (B), Hispanic (H), Asian American (A) American Indian (I), Female (F) Socially and Economically Disadvantaged (D)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____



Signature: _____

Title: _____

State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

State of North Carolina AFFIDAVIT D – Good Faith Efforts

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by HUB Certified/ minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of _____ I do hereby certify that on the
(Name of Bidder)

Project ID# _____ (Project Name)
Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with HUB certified/ minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

*Minority categories: Black, African American (B), Hispanic (H), Asian American (A) American Indian (I), Female (F) Socially and Economically Disadvantaged (D)

** HUB Certification with the state HUB Office required to be counted toward state participation goals.

Examples of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

- Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- Copies of quotes or responses received from each firm responding to the solicitation.
- A telephone log of follow-up calls to each firm sent a solicitation.
- For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- Copy of pre-bid roster
- Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- Letter detailing reasons for rejection of minority business due to lack of qualification.
- Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

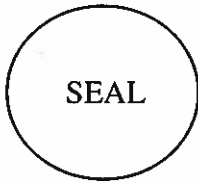
Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

Notice of Award

Dated _____

Project: Hyde County (FY09 CDBG) Lake Swamp Road	Owner: Hyde County, NC	Owner's Contract No.: --N/A--
Contract:		Engineer's Project No.: 09052

Bidder:

Bidder's Address: (send Certified Mail, Return Receipt Requested)

You are notified that your Bid dated _____ for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for: _____

The Contract Price of your Contract is _____ Dollars (\$_____).

(Insert appropriate data if Unit Prices are used. Change language for Cost-Plus contracts.)

3 copies of each of the proposed Contract Documents (except Drawings & Project Manual) accompany this Notice of Award.

1 set of the Drawings & Project Manual will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within [15] days of the date you receive this Notice of Award.

1. Deliver to the Owner 3 fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract security [Bonds] as specified in the Instructions to Bidders (Article 20), [and] General Conditions (Paragraph 5.01) [and Supplementary Conditions (Paragraph SC-5.01).]
3. Other conditions precedent:

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

Hyde County
Owner

By: _____
Kris Noble

Grant Technician, Hyde County, North Carolina
Title

Copy to Engineer

**EJCDC
SUGGESTED FORM OF AGREEMENT
BETWEEN OWNER AND CONTRACTOR FOR
CONSTRUCTION CONTRACT (STIPULATED PRICE)
FUNDING AGENCY EDITION**

THIS AGREEMENT is by and between Hyde County (Owner)
and _____ (Contractor).

Owner and Contractor, in consideration of the mutual covenants set forth herein, agree as follows:

ARTICLE 1 - WORK

Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

- Installation of approximately 1,835 lf of 6-inch diameter potable water supply line extension, two post type hydrants, service laterals, and all related appurtenances.
- Installation of approximately 1,500 lf of 2-inch diameter sanitary force main extension, six 1,000 gallon septic tanks with simplex pumps, service laterals, and all related appurtenances and all other work associated with the Hyde County (FY 09 CDBG) Lake Swamp Road project.

ARTICLE 2 - THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

*Hyde County (FY 09 CDBG) Lake Swamp Road
Engelhard, Hyde County, North Carolina*

ARTICLE 3 - ENGINEER

3.01 The Project has been designed by *Quible & Associates, P.C.* who is hereinafter called Engineer and who is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 - CONTRACT TIME

4.01 Time of the Essence

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 Days to Achieve Substantial Completion and Final Payment

A. The Work will be substantially completed within 60 days after the date when the Contract Time commence to run as provided in Paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions within 90 days after the date when the Contract Time commence to run.

4.03 Liquidated Damages

A. Contractor and Owner recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of

requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner \$500.00 for each day that expires after the time specified in Paragraph 4.02 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner \$500.00 for each day that expires after the time specified in Paragraph 4.02 for completion and readiness for final payment until the Work is completed and ready for final payment.

ARTICLE 5 - CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraph 5.01.A. All specific cash allowances are included in the prices and have been computed in accordance with Paragraph 11.02 of the General Conditions.

A. For all Work other than Unit Price Work, a Lump Sum of:

_____ \$ _____
(use words)

All specific cash allowances are included in the above price, and have been completed in accordance with paragraph 11.02 of the General Conditions.

B. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in this paragraph 5.01.B:

As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions. Unit prices have been computed as provided in Paragraph 11.03 of the General Conditions.

UNIT PRICE WORK

<u>No.</u>	<u>Item</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Estimated Price</u>
ESTIMATED TOTAL OF ALL UNIT PRICE WORK			\$ _____	N/A (use words)	\$(<u>N/A</u>) (figure)

ARTICLE 6 - PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments

A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 Progress Payments; Retainage

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the last day of each month during performance of the Work as provided in Paragraphs 6.02.A.1 and 6.02.A.2 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions:

a. 95 percent of Work completed (with the balance being retainage); and

b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

2. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 95 percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions.

6.03 Final Payment

A. Upon receipt of the final Application for Payment accompanied by Engineer's recommendation of payment in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay Contractor as provided in Paragraph 14.07 of the General Conditions the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages.

ARTICLE 7 - INTEREST

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the maximum legal rate.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Agreement Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all Federal, State, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a Hazard Environmental Condition, if any, which has been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions.

E. Contractor has obtained and carefully studied (or assumes responsibility for doing so) all examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto.

F. Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

H. Contractor has correlated the information known to Contractor, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

I. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 - CONTRACT DOCUMENTS

9.01 Contents

A. The Contract Documents consist of the following:

1. This Agreement
2. Performance bond
3. Payment bond
4. General Conditions
5. Supplementary Conditions
7. Specifications as listed in the table of contents of the Project Manual.
8. Drawings consisting of 5 sheets with sheets bearing the following general titles:
Hyde County FY 09 CDBG Lake Swamp Road, as prepared by Quible & Associates, P.C.
9. Addenda (numbers _____ to _____, inclusive).
10. Exhibits to this Agreement:
 - a. Notice of Award
 - b. Notice to Proceed
 - c. Contractor's Bid
 - d. Documentation submitted by Contractor prior to Notice of Award (pages _____ to _____, inclusive).
 - e. Certificate of Attorney
 - f. Certificate of Financial Officer
 - g. _____.

11. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

- a. Notice to Proceed.
- b. Work Change Directives.
- c. Change Order(s).
- d. Application for Payment.
- e. Certificate of Substantial Completion.

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 - MISCELLANEOUS

10.01 Terms

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 Assignment of Contract

- A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 Successors and Assigns

- A. Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 Severability

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 Other Provisions – *not used*

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement in three copies. One counterpart each has been delivered to Owner, Contractor, and Engineer. All portions of the Contract Documents have been signed, initialed, or identified by Owner and Contractor or identified by Engineer on their behalf.

This Agreement will be effective _____, _____ (which is the Effective Date of the Agreement). This Agreement shall not be effective unless and until Agency's designated representative concurs.

OWNER:

CONTRACTOR:

By: Kris Noble

By: _____

Title: Grant Technician, Hyde County

Title: _____

[CORPORATE SEAL]

[CORPORATE SEAL]

Attest: _____

Attest: _____

Title: _____

Title: _____

Designated Representatives:

Designated Representatives:

Name: Kris Noble

Name: _____

Title: Grant Technician

Title: _____

Address for giving notices:

Address for giving notices:

Hyde County, Attn: Ms. Kris Noble

P.O. Box 188, 30 Oyster Creek Road

Swan Quarter, North Carolina 27885

Phone: (252) 926 - 4474 FAX: (252) 926-3701

Phone: _____ FAX: _____

License No.: _____

(Where applicable)

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of Owner-Contractor Agreement.)

Agent for service or process: _____

(If Contractor is a corporation or a partnership, attach evidence of authority to sign.)

Agency Concurrence:

As lender or insurer of funds to defray the costs of this Contract, and without liability for any payments thereunder, the Agency hereby concurs in the form, content, and execution of this Agreement.

Agency: _____

By: _____

Date: _____

Title: _____

Notice to Proceed

Dated _____

Project: Hyde County (FY 09 CDBG) Lake Swamp Road	Owner: Hyde County, NC	Owner's Contract No.: n/a
Contract:		Engineer's Project No.: 09052
Contractor:		
Contractor's Address: [send Certified Mail, Return Receipt Requested]		

You are notified that the Contract Times under the above contract will commence to run on _____. On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the date of Substantial Completion is _____, and the date of readiness for final payment is _____ [(or) the number of days to achieve Substantial Completion is _____, and the number of days to achieve readiness for final payment is _____].

Before you may start any Work at the Site, Paragraph 2.01.B of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must [add other requirements]:

Hyde County, North Carolina

Owner

Given by: Kris Noble

Authorized Signature

Grant Technician, Hyde County, North Carolina

Title

Date

Copy to Engineer

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

Bond Number:

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

Company:

Signature: _____ (Seal)

Name and Title:

SURETY

(Seal)

Surety's Name and Corporate Seal

By:

Signature and Title

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

Attest:

Signature and Title

CONTRACTOR AS PRINCIPAL

Company:

Signature: _____ (Seal)

Name and Title:

SURETY

(Seal)

Surety's Name and Corporate Seal

By:

Signature and Title

(Attach Power of Attorney)

Attest:

Signature and Title:

EJCDC No. C-610 (2002 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.
2. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 3.1.
3. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
 - 3.1. Owner has notified Contractor and Surety, at the addresses described in Paragraph 10 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and
 - 3.2. Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 3.1; and
 - 3.3. Owner has agreed to pay the Balance of the Contract Price to:
 1. Surety in accordance with the terms of the Contract;
 2. Another contractor selected pursuant to Paragraph 4.3 to perform the Contract.
4. When Owner has satisfied the conditions of Paragraph 3, Surety shall promptly and at Surety's expense take one of the following actions:
 - 4.1. Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
 - 4.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - 4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and Contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
 - 4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:
 1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
 2. Deny liability in whole or in part and notify Owner citing reasons therefor.
5. If Surety does not proceed as provided in Paragraph 4 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 4.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.
6. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To a limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:
 - 6.1. The responsibilities of Contractor for correction of defective Work and completion of the Contract;
 - 6.2. Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions or failure to act of Surety under Paragraph 4; and
 - 6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.
7. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.
8. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.
9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
10. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.
11. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
12. Definitions.
 - 12.1. Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.
 - 12.2. Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
 - 12.3. Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
 - 12.4. Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or comply with the other terms thereof.

FOR INFORMATION ONLY – Name, Address and Telephone
 Surety Agency or Broker
 Owner's Representative (engineer or other party)

PAYMENT BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

CONTRACT

Effective Date of Agreement:

Amount:

Description (*Name and Location*):

BOND

Bond Number:

Date (*Not earlier than Effective Date of Agreement*):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.
2. With respect to Owner, this obligation shall be null and void if Contractor:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2.2 Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.
3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.
4. Surety shall have no obligation to Claimants under this Bond until:
 - 4.1 Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
 - 4.2 Claimants who do not have a direct contract with Contractor:
 1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
 2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
 3. Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.
5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.
6. Reserved.
7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.
8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.
9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

15.1 Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

15.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract, or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – (*Name, Address, and Telephone*)

Surety Agency or Broker:

Owner's Representative (*Engineer or other*):

EXHIBIT CFO-1

Certificate of Finance Officer

Provisions for the payment of the monies to fall due under this agreement has been made by appropriation duly made or by bonds or notes duly authorized, as required by the "Local Government Budget and Fiscal Control Act."

Finance Officer

Date: _____

	Application Period:	Application Date:
To (Owner):	From (Contractor):	Via (Engineer)
Project:	Contract:	
Owner's Contract No.:	Contractor's Project No.:	Engineer's Project No.:

Approved Change Orders		
Number	Additions	Deductions
TOTALS		
NET CHANGE BY CHANGE ORDERS		

- Page 1 of 3

Certificate of Substantial Completion

Project: Hyde County (FY 09 CDBG) Lake Swamp Road	Owner: Hyde County, NC	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.: 09052

This [tentative] [definitive] Certificate of Substantial Completion applies to:

- ☐ All Work under the Contract Documents: ☐ The following specified portions:

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby declared and is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

A [tentative] [revised tentative] [definitive] list of items to be completed or corrected, is attached hereto. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as provided in the Contract Documents except as amended as follows:

- ☐ Amended Responsibilities ☐ Not Amended

Owner's Amended Responsibilities:

Contractor's Amended Responsibilities:

The following documents are attached to and made part of this Certificate:

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Executed by Engineer

Date

Accepted by Contractor

Date

Accepted by Owner

Date

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT FUNDING AGENCY EDITION

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

AMERICAN COUNCIL OF ENGINEERING COMPANIES

AMERICAN SOCIETY OF CIVIL ENGINEERS

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GENERAL CONDITIONS

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda* – Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agency* – The Federal or state agency named as such in the Agreement.
 3. *Agreement* – The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 4. *Application for Payment* – The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 5. *Asbestos* – Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 6. *Bid* – The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 7. *Bidder* – The individual or entity who submits a Bid directly to Owner.
 8. *Bidding Documents* – The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 9. *Bidding Requirements* – The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.
 10. *Change Order* – A document recommended by Engineer which is signed by Contractor and Owner and Agency and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 11. *Claim* – A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 12. *Contract* – The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
 13. *Contract Documents* – Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

14. *Contract Price* – The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
15. *Contract Times* – The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
16. *Contractor* – The individual or entity with whom Owner has entered into the Agreement.
17. *Cost of the Work* – See Paragraph 11.01.A for definition.
18. *Drawings* – That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
19. *Effective Date of the Agreement* – The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
20. *Engineer* – The individual or entity named as such in the Agreement.
21. *Field Order* – A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
22. *General Requirements* – Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.
23. *Hazardous Environmental Condition* – The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.
24. *Hazardous Waste* – The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
25. *Laws and Regulations; Laws or Regulations* – Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens* – Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
27. *Milestone* – A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
28. *Notice of Award* – The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
29. *Notice to Proceed* – A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
30. *Owner* – The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
31. *PCBs* – Polychlorinated biphenyls.

32. *Petroleum* – Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
33. *Progress Schedule* – A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
34. *Project* – The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
35. *Project Manual* – The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
36. *Radioactive Material* – Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
37. *Related Entity* – An officer, director, partner, employee, agent, consultant, or subcontractor.
38. *Resident Project Representative* – The authorized representative of Engineer who may be assigned to the Site or any part thereof.
39. *Samples* – Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
40. *Schedule of Submittals* – A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
41. *Schedule of Values* – A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
42. *Shop Drawings* – All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
43. *Site* – Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
44. *Specifications* – That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
45. *Subcontractor* – An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
46. *Substantial Completion* – The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.
47. *Successful Bidder* – The Bidder submitting a responsive Bid to whom Owner makes an award.

- 48. *Supplementary Conditions* – That part of the Contract Documents which amends or supplements these General Conditions.
- 49. *Supplier* – A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.
- 50. *Underground Facilities* – All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
- 51. *Unit Price Work* – Work to be paid for on the basis of unit prices.
- 52. *Work* – The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
- 53. *Work Change Directive* – A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and Agency upon recommendation of the Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

- A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.
- B. *Intent of Certain Terms or Adjectives*
 - 1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.
- C. *Day*
 - 1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective*
 - 1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:

- a. does not conform to the Contract Documents, or
- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
- c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide*

- 1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 - 2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 - 3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 - 4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement.

2.04 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
1. a preliminary Progress Schedule;
 2. a preliminary Schedule of Submittals; and
 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, Agency, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. *Standards, Specifications, Codes, Laws, and Regulations*

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
 - 1. A Field Order;
 - 2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3) or
 - 3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or
 - 2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaption by Engineer.
- B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for

giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and
2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

- B. *Engineer's Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.
- C. *Possible Price and Times Adjustments*
1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
 3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

- A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data,
 - b. locating all Underground Facilities shown or indicated in the Contract Documents,
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and

- d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 *Contractor's Liability Insurance*

- A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include completed operations insurance;
 4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
 5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
 6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
 7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.
 - a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (Contractor shall be responsible for any deductible or self-insured retention.). This insurance shall:
1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;
 2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.
- B. Contractor shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.
- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Contractor as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Contractor and made payable to Contractor as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Contractor shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof.
- B. Contractor as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Contractor's exercise of this power. If such objection be made, Contractor as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Contractor as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Contractor as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of

non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

6.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
 - 1. "*Or-Equal*" Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) it has a proven record of performance and availability of responsive service; and
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times, and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
 - b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
 - c. The procedure requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.
 - d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) will perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;
 - b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
 - c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified , and
 - b) available engineering, sales, maintenance, repair, and replacement services;
 - 4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor
 - 2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain

that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

- C. *Cleaning:* Prior to Substantial Completion of the Work, Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved

Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract

Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

- A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.
 - 1. *Shop Drawings*
 - a. Submit number of copies specified in the General Requirements.
 - b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.
 - 2. *Samples*
 - a. Submit number of Samples specified in the Specifications.
 - b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.
- B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Submittal Procedures*
 - 1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:
 - a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;
 - c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and
 - d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.
 - 2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
 - 3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 Continuing the Work

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
4. use or occupancy of the Work or any part thereof by Owner;
5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
6. any inspection, test, or approval by others; or
7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:
 1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 1. written notice thereof will be given to Contractor prior to starting any such other work; and
 - 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
 - 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 - 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 - 3. the extent of such authority and responsibilities will be provided.

- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

- A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

- A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, subject to written approval by Agency at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

- A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).
- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part,
 2. approve the Claim, or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.
 - 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
 - 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 - 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
 - 4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
 - 5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expressages, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

- C. **Contractor's Fee:** When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. **Documentation:** Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. **Cash Allowances**
 - 1. Contractor agrees that:
 - a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. **Contingency Allowance**
 - 1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
1. the Bid price of a particular item of Unit Price Work amounts to more than 5 percent of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and
 2. there is no corresponding adjustment with respect to any other item of Work; and
 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. Contractor's Fee: The Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

- e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.B.
 - 1. delays caused by or within the control of Contractor; or
- D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. repair such defective land or areas; or
 - 2. correct such defective Work; or
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;

- b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
- 3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
 - b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
- 4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
- 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. the Contractor's performance or furnishing of the Work is inconsistent with funding Agency requirements;
 - d. there are other items entitling Owner to a set-off against the amount recommended; or
 - e. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.
3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 Contractor's Warranty of Title

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Agency, Contractor, and Engineer shall make a prefinal inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.
 - 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner, Agency, and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

- A. *Application for Payment*
 - 1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims. The remaining balance of any sum included in the final Application for Payment but held by OWNER for Work not fully completed and accepted will become due when the Work is fully completed and accepted.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's disregard of the authority of Engineer; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),
 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by

Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 - 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

- A. Owner and Contractor may mutually request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
 - 1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or
 - 2. agrees with the other party to submit the Claim to another dispute resolution process, or
 - 3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 - 1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or
 - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

ARTICLE 18 – FEDERAL REQUIREMENTS

18.01 *Agency Not a Party*

- A. This Contract is expected to be funded in part with funds provided by Agency. Neither Agency, nor any of its departments, entities, or employees is a party to this Contract.

18.02 *Contract Approval*

- A. Owner and Contractor will furnish Owner's attorney such evidence as required so that Owner's attorney can complete and execute the following "Certificate of Owner's Attorney" (Exhibit GC-A) before Owner submits the executed Contract Documents to Agency for approval.
- B. Concurrence by Agency in the award of the Contract is required before the Contract is effective.

18.03 *Conflict of Interest*

- A. Contractor may not knowingly contract with a supplier or manufacturer if the individual or entity who prepared the plans and specifications has a corporate or financial affiliation with the supplier or manufacturer.
- B. Owner's officers, employees, or agents shall not engage in the award or administration of this Contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: (i) the employee, officer or agent; (ii) any member of their immediate family; (iii) their partner or (iv) an organization that employs, or is about to employ, any of the above, has a financial interest in Contractor. Owner's officers, employees, or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from Contractor or subcontractors.

18.04 *Gratuities*

- A. If Owner finds after a notice and hearing that Contractor, or any of Contractor's agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any official, employee, or agent of Owner or Agency in an attempt to secure this Contract or favorable treatment in awarding, amending, or making any determinations related to the performance of this Contract, Owner may, by written notice to Contractor, terminate this Contract. Owner may also pursue other rights and remedies that the law or this Contract provides. However, the existence of the facts on which Owner bases such findings shall be an issue and may be reviewed in proceedings under the dispute resolution provisions of this Contract.
- B. In the event this Contract is terminated as provided in paragraph 18.04.A, Owner may pursue the same remedies against Contractor as it could pursue in the event of a breach of this Contract by Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, Owner may pursue exemplary damages in an

amount (as determined by Owner) which shall not be less than three nor more than ten times the costs Contractor incurs in providing any such gratuities to any such officer or employee.

18.05 *Audit and Access to Records*

- A. For all negotiated contracts and negotiated modifications (except those of \$10,000 or less), Owner, Agency, the Comptroller General, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Contractor, which are pertinent to the Contract, for the purpose of making audits, examinations, excerpts and transcriptions. Contractor shall maintain all required records for three years after final payment is made and all other pending matters are closed.

18.06 *Small, Minority and Women's Businesses*

- A. If Contractor intends to let any subcontracts for a portion of the work, Contractor shall take affirmative steps to assure that small, minority and women's businesses are used when possible as sources of supplies, equipment, construction, and services. Affirmative steps shall consist of: (1) including qualified small, minority and women's businesses on solicitation lists; (2) assuring that small, minority and women's businesses are solicited whenever they are potential sources; (3) dividing total requirements when economically feasible, into small tasks or quantities to permit maximum participation of small, minority, and women's businesses; (4) establishing delivery schedules, where the requirements of the work permit, which will encourage participation by small, minority and women's businesses; (5) using the services and assistance of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce; (6) requiring each party to a subcontract to take the affirmative steps of this section; and (7) Contractor is encouraged to procure goods and services from labor surplus area firms.

18.07 *Anti-Kickback*

- A. Contractor shall comply with the Copeland Anti-Kickback Act (18 USC 874 and 40 USC 276c) as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part by Loans or Grants of the United States"). The Act provides that Contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public facilities, to give up any part of the compensation to which they are otherwise entitled. Owner shall report all suspected or reported violations to Agency.

18.08 *Clean Air and Pollution Control Acts*

- A. If this Contract exceeds \$100,000, Contractor shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 USC 7401 *et seq.*) and the Federal Water Pollution Control Act as amended (33 USC 1251 *et seq.*). Contractor will report violations to the Agency and the Regional Office of the EPA.

18.09 *State Energy Policy*

- A. Contractor shall comply with the Energy Policy and Conservation Act (P.L. 94-163). Mandatory standards and policies relating to energy efficiency, contained in any applicable State Energy Conservation Plan, shall be utilized.

18.10 *Equal Opportunity Requirements*

- A. If this Contract exceeds \$10,000, Contractor shall comply with Executive Order 11246, "Equal Employment Opportunity," as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."
- B. Contractor's compliance with Executive Order 11246 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative active obligations required by the Standard Federal Equal Employment

Opportunity Construction Contract Specifications, as set forth in 41 CFR Part 60-4 and its efforts to meet the goals established for the geographical area where the Contract is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting Contractor's goals shall be a violation of the Contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

- C. Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the Contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the Contract is to be performed.

18.11 *Restrictions on Lobbying*

- A. Contractor and each subcontractor shall comply with Restrictions on Lobbying (Public Law 101-121, Section 319) as supplemented by applicable Agency regulations. This Law applies to the recipients of contracts and subcontracts that exceed \$100,000 at any tier under a Federal loan that exceeds \$150,000 or a Federal grant that exceeds \$100,000. If applicable, Contractor must complete a certification form on lobbying activities related to a specific Federal loan or grant that is a funding source for this Contract. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 USC 1352. Each tier shall disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Certifications and disclosures are forwarded from tier to tier up to the Owner. Necessary certification and disclosure forms shall be provided by Owner.

18.12 *Environmental Requirements*

- A. When constructing a project involving trenching and/or other related earth excavations, Contractor shall comply with the following environmental constraints:
 - 1. Wetlands – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert wetlands.
 - 2. Floodplains – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert 100 year floodplain areas delineated on the latest Federal Emergency Management Agency Floodplain Maps, or other appropriate maps, i.e., alluvial soils on NRCS Soil Survey Maps.
 - 3. Historic Preservation – Any excavation by Contractor that uncovers an historical or archaeological artifact shall be immediately reported to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the State Historic Preservation Officer (SHPO).
 - 4. Endangered Species – Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the U.S. Fish and Wildlife Service.

EXHIBIT GC-A

Certificate of Owner's Attorney

I, the undersigned, _____, the duly authorized and acting legal representative of _____, do hereby certify as follows:

I have examined the attached Contract(s) and performance and payment bond(s) and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements is adequate and has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions, and provisions thereof.

Date: _____

Change Order

No. _____

Date of Issuance: _____ Effective Date: _____

Project:	Owner:	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.:

The Contract Documents are modified as follows upon execution of this Change Order:

Description: _____

Attachments: (List documents supporting change):

CHANGE IN CONTRACT PRICE:

Original Contract Price:

\$ _____

[Increase] [Decrease] from previously approved Change Orders No. _____ to No. _____:

\$ _____

Contract Price prior to this Change Order:

\$ _____

[Increase] [Decrease] of this Change Order:

\$ _____

Contract Price incorporating this Change Order:

\$ _____

CHANGE IN CONTRACT TIMES:

Original Contract Times: ☐ Working days ☐ Calendar days

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

[Increase] [Decrease] from previously approved Change Orders No. _____ to No. _____:

Substantial completion (days): _____

Ready for final payment (days): _____

Contract Times prior to this Change Order:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

[Increase] [Decrease] of this Change Order:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

Contract Times with all approved Change Orders:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

RECOMMENDED:

By: _____
Engineer (Authorized Signature)

Date: _____

Approved by Funding Agency (if applicable): _____

ACCEPTED:

By: _____
Owner (Authorized Signature)

Date: _____

ACCEPTED:

By: _____
Contractor (Authorized Signature)

Date: _____

Date: _____

Change Order

Instructions

A. GENERAL INFORMATION

This document was developed to provide a uniform format for handling contract changes that affect Contract Price or Contract Times. Changes that have been initiated by a Work Change Directive must be incorporated into a subsequent Change Order if they affect Price or Times.

Changes that affect Contract Price or Contract Times should be promptly covered by a Change Order. The practice of accumulating Change Orders to reduce the administrative burden may lead to unnecessary disputes.

If Milestones have been listed in the Agreement, any effect of a Change Order thereon should be addressed.

For supplemental instructions and minor changes not involving a change in the Contract Price or Contract Times, a Field Order should be used.

B. COMPLETING THE CHANGE ORDER FORM

Engineer normally initiates the form, including a description of the changes involved and attachments based upon documents and proposals submitted by Contractor, or requests from Owner, or both.

Once Engineer has completed and signed the form, all copies should be sent to Owner or Contractor for approval, depending on whether the Change Order is a true order to the Contractor or the formalization of a negotiated agreement for a previously performed change. After approval by one contracting party, all copies should be sent to the other party for approval. Engineer should make distribution of executed copies after approval by both parties.

If a change only applies to price or to times, cross out the part of the tabulation that does not apply.

Section 01400
General Requirements

1 General

1.1 Summary of Work

1.1.1 The work covered under this contract comprises the furnishing of all labor, materials, equipment, tools and services and the installation and construction of all items, and the performance of all work necessary to complete the work shown or called for on the drawings and/or this project manual.

1.1.2 All units under this Contract shall be operable, shall be installed as designed, and shall conform to the manufacturer's specifications for the particular application.

1.2 Contractor Use of Premises

1.2.1 The Contractor shall assume full responsibility for protection and safekeeping of products stored on or off premises.

1.2.2 The Contractor shall coordinate use of premises with the Owner and Engineer, and remove stored products that interfere with the operations of the Owner or other Contractors.

1.2.3 The Contractor shall obtain and pay for all additional storage or work areas needed for operations under this Contract. These areas shall be subject to the same conditions as described for the Owner's property.

1.3 Construction and Scheduling Sequence

1.3.1 All associated water and sewer utilities shall remain in full operation during the construction period. Phases of the construction which involve the temporary interruption of essential services and demolition of existing items shall be scheduled in consultation with the Owner or his representative, shall not be of longer duration than essential to accomplish the purpose for such interruptions, and shall be coordinated to give the Owner the ability to maintain water and sewer service. Liaison with the Owner in these matters is a salient feature of this contract.

1.3.2 Provide a written construction schedule and plan which describes in detail each major task and operation which will interfere with any existing system, equipment, or operation. The plan shall describe the sequence and proposed method of accomplishing each task and the proposed schedule for interruptions.

1.3.3 All construction activities shall be performed inside acquired easements and right of ways designated for this project. Laydown areas for this project shall be the Contractor's responsibility. Coordination and scheduling of

construction activities with Hyde County and Engelhard Sanitary District is a salient feature of this contract.

1.3.4 The Contractor shall schedule construction activities to maintain access to properties along the route of the project during normal business hours.

1.3.5 The Contractor shall submit a detailed outage plan for the construction activities to Engineer and Owner as a shop drawing submittal for review and approval prior to starting construction. The outage plan shall include a construction schedule and address construction sequencing for the work. The Contractor shall provide all equipment and personnel required to facilitate the work during each outage.

1.4 Work Restrictions

1.4.1 Occupancy: If the Owner elects to operate any of the improvements under partial utilization, prior to the project's final acceptance, neither Engineer nor the Contractor shall be held responsible for the safety or well being of those occupants beyond the normal care and practice of the construction industry.

1.4.2 Normal working hours for the Contractor shall be 8:00 A.M. to 5:00 P.M., Monday through Friday, excluding state and federal holidays, unless otherwise approved by Owner or Engineer.

1.5 Contract Modification Procedures

1.5.1 Changes in the work shall be initiated and authorized per Article 10 of the Standard General Conditions of the Construction Contract.

1.6 Payment Procedures

1.6.1 Applications and Certificates for Payment: The form of each application for payment shall be EJCDC No. C-620 entitled, "Contractor's Application for Payment". Each application shall be submitted on forms, copies of which are included in this project manual. Payment for stored material delivered but not incorporated in the work will be the invoiced amount only. Submit application invoices with application for payment.

1.6.2 Upon recommendation by Engineer of the Contractor's request for partial payment, the Owner shall pay to the Contractor 95 percent of the total amount due and the Owner shall retain 5 percent of the amount due until final completion and acceptance of all work covered by the contract.

1.6.3 Schedule of Values: Submit complete schedule of values at least 10 days prior to first application for payment.

1.7 Project Meetings

- 1.7.1 Preconstruction conferences with the Contractor will be held after the effective date of the agreement.
- 1.7.2 Progress Meetings: Each month, the Contractor, Engineer, and the Owner shall hold a progress meeting to review progress to date and to resolve all questions for the upcoming month.
- 1.8 Progress Schedules: Submit a detailed construction schedule prior to the preconstruction conference. Revise the schedule prior to each progress meeting. Construction schedule shall be in a form that will clearly show the proposed degree of completeness of each aspect of the construction throughout the life of the contract. Bar graphs and/or PERT diagrams are acceptable forms.
- 1.9 Submittal Procedures
 - 1.9.1 Shop Drawings, Product Data, and Samples: Prior to the preconstruction conference, prepare a submittal schedule satisfactory to Engineer fixing the dates for submission of shop drawings, product data, samples, and the like and update this schedule at each progress meeting to reflect the status of each submittal item.
 - 1.9.1.1 Submit six copies of all shop drawings.
 - 1.9.1.2 A maximum of two marked copies will be returned to the Contractor.
 - 1.9.1.3 Submit shop drawings, product data, samples, and the like as required by applicable specification sections.
 - 1.9.1.4 Identify each item submitted using applicable specification section number and paragraph reference or drawing reference.
 - 1.9.1.5 Shop drawings shall be approved by the Contractor and those subcontractors whose work is associated with the subject equipment as being in accordance with the contract documents prior to submission.
 - 1.9.1.6 Failure to comply with these requirements will result in the submittal being returned unprocessed.
 - 1.9.2 The Engineer's approval of Contractor's shop drawings will be general and shall not relieve the Contractor from the responsibility for adherence to the Contract, nor shall it relieve him of the responsibility for any errors that may exist. Where such errors or omissions are discovered later, they shall be made good by the Contractor, irrespective of any approval by the Engineer.

1.10 Quality Control

- 1.10.1 Testing Laboratory Services: The Contractor will employ and pay for the services of an independent testing laboratory to perform testing specified to be done by an independent testing laboratory, unless specifically stated otherwise in other sections of the specifications. Employment of the laboratory shall in no way relieve the Contractor's obligations to perform the work of the contract.

1.11 Temporary Utilities

- 1.11.1 Temporary Electricity: The Contractor shall make all necessary arrangements for obtaining temporary electric power for construction purposes. No separate payment for electric power for construction purposes or testing other than the payment included in the contract lump sum or unit prices will be allowed.
- 1.11.2 Temporary Water: The Contractor shall make all necessary arrangements for securing water for construction purposes at his own cost and expense. No separate payment, other than that included in the contract lump sum or unit prices, will be allowed for water so used.
- 1.11.3 Temporary Sanitary Facilities: Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees as will comply with laws and regulations.

1.12 Temporary Controls

- 1.12.1 Construction Cleaning: The Contractor shall clean daily all areas under construction to ensure minimum interference with roads, streets, sidewalks, and access of adjacent property owners.
- 1.12.2 Erosion and Sediment Control: These controls shall be in coordination with the appropriate drawings and any requirements of the local authority.
- 1.12.3 Dust Control: Contractor shall ensure that dust is held to a minimum throughout the length of the project through the application of moisture where applicable.

1.13 Vehicular Access and Parking

- 1.13.1 Parking and Laydown Areas: The location of Contractor parking and laydown areas shall be as agreed upon by the Owner and the Engineer. Provide gravel in the laydown area and comply with the local and state regulations.

- 1.14 E-Mail Address: The Contractor shall provide an e-mail address to allow the Owner and the Engineer to correspond with the Contractor's project manager during the construction period.

- 1.15 Project Sign: Within two weeks of the notice to proceed, erect a project sign at a location as directed by Owner and/or Engineer. The project sign shall be maintained according to the specifications set forth below:

Size: 4'x8'x3/4"

Material: APA Rated A-B Grade – Exterior, plywood or other firm material that will withstand wind and moisture without warping

Framing: 2"x4" nominal on four sides and center cross bracing

Supports: 4"x4"x11' nominal post

Mounting: Sign is to be mounted to the 4"x4" post with a 3/8" minimum bolt and nut, four on each side of the sign. Each bolt is to have two washers, one between the sign and the head of the bolt and the other between the post and the nut.

Erection: 4"x4" posts are to set three to four feet deep into concrete 12" in diameter.

Paint: Face: three coats outdoor enamel (sprayed)

Rear: one coat outdoor enamel (sprayed)

Background: white

Wording on the sign shall include, but not limited to, the following information:

Project: Hyde County (FY 09 CDBG) Lake Swamp Road

Owner: Hyde County, North Carolina

Engineer: Quible & Associates, P.C.

Engineering ▪ Environmental Sciences ▪ Planning ▪
Surveying

Kitty Hawk, North Carolina

Telephone: (252) 261-3300

Contractor: Company Name, City, State, Telephone

1.16 Product Requirements

1.16.1 Quality of Material and Equipment Incorporated into the Work:

- 1.16.1.1 Design, fabricate and assemble in accordance with the best engineering and shop practices.

- 1.16.1.2 Manufacture like parts of duplicate units to standard sizes and gauges, to be interchangeable.
- 1.16.1.3 Two or more items of the same kind shall be identical, by the same manufacturer.
- 1.16.1.4 Products shall be suitable for services conditions.
- 1.16.1.5 Equipment capacities, sizes, and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
- 1.16.2 Except as specifically indicated or specified, materials and equipment removed from the existing structure shall not be used in the completed work.
- 1.16.3 For material and equipment specifically indicated or specified to be reused in the work:
 - 1.16.3.1 Use special care in removal, handling, storage, and reinstallation to assure proper function in the completed work.
 - 1.16.3.2 Arrange for transportation, storage, and handling of products, which require off-site storage, restoration, or renovation. Pay all costs for such work.
- 1.16.4 Manufacturer's Instructions
 - 1.16.4.1 When contract documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including two copies to Engineer.
 - 1.16.4.2 Maintain one set of complete instructions at the job site during installation and until completion.
 - 1.16.4.3 Handle, install, connect, clean, condition, and adjust products in accordance with such instructions and in conformity with specified requirements.
- 1.16.5 Transportation and Handling of Materials
 - 1.16.5.1 Arrange deliveries of products in accordance with construction schedules. Coordinate to avoid conflict with work and conditions at the site.
 - 1.16.5.2 Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.

- 1.16.5.3 Immediately on delivery, inspect shipments to assure compliance with requirements of contract documents and approved submittals, and that products are properly protected and undamaged.

1.16.6 Storage and Protection

- 1.16.6.1 Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.

- 1.16.6.2 Store products subject to damage by the elements in weathertight enclosures.

- 1.16.6.3 Maintain temperature and humidity within the ranges required by manufacturer's instructions.

1.16.6.4 Exterior Storage

- 1.16.6.4.1 Store fabricated products above the ground, on blocking or skids; prevent soiling or staining; cover products, which are subject to deterioration with impervious sheet coverings; and provide adequate ventilation to avoid condensation.

- 1.16.6.4.2 Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.

- 1.16.6.4.3 Protection after Installation: Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove when no longer needed.

1.17 Lines and Grades

- 1.17.1 The Contractor shall include \$2,500 in Base Bid Item No. 1 and \$2,500 in Base Bid Item No. 2, respectively, to be provided as payment for the initial construction stakeout provided by Quible & Associates, P.C. Certified Land Surveyor. Should the Contractor disturb the initial stakeout, restaking will be provided on an hourly rate to the Contractor by Quible & Associates, P.C. Stakeout will include location and elevation data to construct piping and other improvements associated with this project. Stakeout services for the project will be as follows:

Base Bid Item No. 1

- Stake limits of clearing as required
- Stake centerline of water line
- Stake water line fittings and appurtenances

Base Bid Item No. 2

- Stake limits of clearing as required
- Stake centerline of force main
- Stake force main fittings and appurtenances
- Stake septic tank locations

1.18 Starting of Systems

- 1.18.1 The Contractor shall initially start up and place all piping systems installed by the Contractor into successful operation according to manufacturers' written instructions and as instructed by manufacturers' representatives.
- 1.18.2 Provide all materials, labor, tools, equipment and expendables required.
- 1.18.3 Coordinate schedule for start-up of various piping systems. Notify the Engineer at least seven days prior to start-up of each piping system. The Owner's operator and the Engineer will be present during start-up.
- 1.18.4 Execute start-up under supervision of responsible manufacturer's representative in accordance with manufacturer's instructions.
- 1.18.5 Submit a written report that piping systems have been properly installed and are functioning correctly.
- 1.18.6 General activities include the following:
 - 1.18.6.1 Cleaning.
 - 1.18.6.2 Removing temporary protective coverings.
 - 1.18.6.3 Flushing and replacing greases and lubricants, where required by manufacturer.
 - 1.18.6.4 Lubrication.
 - 1.18.6.5 Test all piping systems at normal operating conditions and through the normal operating range.
 - 1.18.6.6 Make all adjustments required.
- 1.18.7 Minimum Start-Up Procedures.
 - 1.18.7.1 Valves: Inspect all valves, clean bonnets and stems. Inspect packing glands to assure no leakage, and tighten or replace as necessary. Verify that control valve seats are free from foreign material and are properly positioned for service.

- 1.18.7.2 Fire Hydrants: Clean, paint, and adjust fire hydrants to correct grade.
- 1.18.7.3 Pipe Joints: Inspect all joints for leakage, and tighten, remake, or replace as necessary.
- 1.18.7.4 Pipe Supports: Inspect all piping supports to assure adequate restraint to prevent displacement, vibration, or failure of piping and fittings, while allowing for expansion and contraction. Modify and adjust as necessary.

1.19 Demonstration and Instructions

- 1.19.1 Prior to final inspection, demonstrate operation of entire project to the Engineer and the Owner.
- 1.19.2 Instruct the Owner's personnel in operation, adjustment, and maintenance of piping systems.

1.20 Acceptance for Operation

- 1.20.1 As soon as the piping system has been properly prepared for operation and it is necessary to be placed into service, bring it on-line; then make an on-line performance test by operating it under approximately normal conditions for a period of 5 consecutive days to demonstrate that all materials and components are in proper working order and free from defects. During this time, the Owner will receive specified instruction on the piping system by qualified personnel, and be furnished all appropriate operation and maintenance manuals. In event of failure to demonstrate successful performance on the first or any subsequent attempt, make all alternations, adjustments, repairs, and replacements that may be needed; and, if it becomes necessary to shut down the piping system, or any portion thereof before the on-line test is satisfactorily completed, provide all appropriate measures to resume water distribution operations without the system. When the piping system is again ready for operation, bring it on-line and start a new on-line test. This procedure shall be repeated as often as necessary until the piping system shall have operated continuously to the satisfaction of the Owner, for a test period duration of 5 consecutive days. The Contractor will furnish all operating personnel (other than vendor's or subcontractor's service engineers) needed to operate piping system during the on-line test period; personnel will perform their duties under the Contractor's direction and supervision. Until performance tests are completed and piping systems are accepted by the Owner for operation, the Contractor shall be fully responsible for supervising their operation.
- 1.20.2 When the on-line test has been completed, the Owner will notify the Contractor to this effect in writing and will then take over the piping system for purpose of operation. Neither this notice nor the act of taking over any

item for operation shall relieve the Contractor from his obligations to complete the facility or perform any other obligations or responsibilities, which extend beyond the completion of the on-line tests.

1.20.3 The Contractor shall maintain full responsibility for the maintenance of all piping systems placed on-line until they have been determined substantially complete. No warranties shall begin prior to the date of substantial completion.

1.20.4 Acceptance Requirements: All piping systems shall pass the specified performance testing prior to substantial completion certifications. Partial acceptance of piping systems will not be allowed.

1.21 Cleaning

1.21.1 Periodically clean premises of accumulated construction debris.

1.21.2 Prior to final completion, thoroughly remove from premises any debris remaining from construction activities, and properly dispose. Leave premises in a clean, neat, orderly and safe condition.

1.22 Contract Closeout Procedures

1.22.1 Punch List: Correct All Punch List Items.

1.22.2 Guarantees, Warranties, and Bonds: Submit all required guarantees, warranties and bonds.

1.22.3 Project Record Documents

1.22.3.1 Provide one complete set of drawings and project manual recording all changes to work to indicate actual installation. Changes shall be noted in legible red letters at least 1/8-inch high. These changes shall include, but are not limited to, the following:

1.22.3.1.1 Size, depth or position of foundations

1.22.3.1.2 Exact location and elevation of all underground utility services.

1.22.3.1.3 Changes in general construction, mechanical, or electrical work above or below ground.

1.22.3.2 These records are a specific contract requirement, and final payment will not be made until these drawings and project manual have been submitted in an acceptable form.

1.22.4 Spare parts and maintenance materials required by these contract documents shall be delivered to the Owner as directed by the Owner.

1.22.5 List of Manufacturers and Suppliers: At the conclusion of the project, the Contractor shall furnish Engineer with a complete list of subcontractors, manufacturers, and suppliers who participated in the construction or who furnished materials or equipment. The address of each firm shall be included, together with types of materials or work performed.

1.22.6 Affidavit of Payment of Debts and Claims

1.22.7 Affidavit of Release of Liens

End of Section

Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract Funding Agency Edition (No. C-710, 2002 Edition) and other provisions of the Contract Documents as indicated below. All provisions that are not so amended or supplemented remain in full force and effect. The terms used in these Supplementary Conditions will have the meanings indicated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

SC-1.01.A.4. Add the following language to the end of Paragraph 1.01.A.4:

The Application for Payment form to be used on this Project is EJCDC No. C-620 and is enclosed.

SC-1.01.A.10. Add the following language to the end of Paragraph 1.01.A.10:

The Change Order form to be used on this Project is EJCDC No. C-941 and is enclosed.

SC-1.01.A.20. Add the following language to the end of Paragraph 1.01.A.20:

The Owner's Consultants on this project are:

**Quible & Associates, P.C.
P.O. Drawer 870
Kitty Hawk, NC 27949**

SC-1.01.A.48. Add the following language to the end of Paragraph 1.01.A.48:

The words "Special Provisions," "Special Conditions," and "Supplementary Conditions," wherever they may appear in these Contract Documents and Specifications, are used interchangeably and shall be interpreted to mean either "Special Conditions" or "Supplementary Conditions" which ever may be applicable.

SC-1.01.A.54. Add the following new Paragraph to the end of Paragraph 1.01.A.53:

Abnormal weather conditions as mentioned in the General Conditions Article 12.3 shall be defined as weather more severe than the average of the last ten (10) years. Rainfall measurements shall be considered at 0.1 inch or greater.

SC-2.02.A. Delete Paragraph 2.02.A in its entirety and insert the following in its place:

A. Owner shall furnish to Contractor up to two printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

SC-2.03.A. Delete Paragraph 2.03.A in its entirety and insert the following in its place:

A. The Contract Time will commence to run on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of Agreement.

SC-4.02. Delete Paragraph 4.02 in its entirety and insert the following in its place:

4.02. No reports or explorations or tests of subsurface conditions at or contiguous to the Site are known to the Owner or Engineer. Contractor shall have full responsibility with respect to subsurface conditions at the site as provided in the Contract Documents.

SC-4.04. Add the following language to the end of Paragraph 4.04.A.2.b:

- e. locating existing service connections which are not indicated on the drawings,
- f. discovering existing underground installations in advance of excavating or trenching, by contacting all local utilities and by prospecting. The Contractor shall notify North Carolina ONE-CALL at 1-800-632-4949 at least 48 hours prior to commencing construction in order that existing utilities in the area may be flagged or staked, protecting and maintaining all existing utilities in an operational manner. Contractor shall note that not all utility owners/operators are members of North Carolina ONE-Call, and that notifying North Carolina ONE-CALL will not assure that all applicable utilities are located.

SC-4.06. Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

- A. No reports or explorations or tests of subsurface conditions at or contiguous to the Site other than those specified in SC-4.02 are known to the Owner or Engineer.
- B. The Contractor and Subcontractors shall comply with all applicable federal, state, and local rules and regulations relating to regulated asbestos or hazardous or toxic materials. The Contractor and Subcontractors shall indemnify and hold harmless Owner and Engineer, their officers, partners, employees, agents and consultants from and against any and all claims, suits, demands, liabilities, losses, or costs, including reasonable attorneys' fees and defense costs, resulting or accruing to any and all persons, firms and any other legal entity, caused by, arising out of or in any way connected with the detection, presence, handling, removal, abatement, or disposal of any asbestos or hazardous or toxic substances, products or materials that exist on, about or adjacent to the job site, whether the liability arises under breach of contract or warranty, tort, including negligence, strict liability or statutory liability or any other cause of action. The Contractor shall include the above provisions in the contracts for subcontractors performing work at the site.

SC-5.03. Add the following new paragraph immediately after Paragraph 5.03.B:

- C. Failure of the Owner to demand such certificates or other evidence of full compliance with these insurance requirements or failure of the Owner to identify a deficiency from evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

SC-5.04. Add the following new paragraph immediately after Paragraph 5.04.B:

- C. The limits of liability for insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

- 1. Workers' Compensation, and related coverages under Paragraphs 5.04.A.1 and A.2 of the General Conditions:

a.	State:	Statutory
b.	Applicable Federal (e.g., Longshoremen's)	Statutory
c.	Employer's Liability	\$ 500,000
d.	Waiver of Subrogation	

The Contractor will provide an endorsement to the Contractor's Workers Compensation and Employer's Liability Insurance waiving all rights of subrogation by the Contractor's insurance carrier against the Owner and Engineer.

- 2. Contractor's General Liability under Paragraphs 5.04.A.3 through A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody, and control of the Contractor:

- | | | |
|----|---|--------------|
| a. | General Aggregate | \$ 2,000,000 |
| b. | Products – Completed Operations Aggregate | \$ 1,000,000 |
| c. | Personal and Advertising Injury (Per Person/Organization) | \$ 1,000,000 |
| d. | Each Occurrence (Bodily Injury and Property Damage) | \$ 1,000,000 |
| e. | Property Damage liability insurance will provide Explosion, Collapse, and Underground coverages where applicable. | |
| f. | Excess or Umbrella Liability | |
| | 1) General Aggregate | \$ 5,000,000 |
| | 2) Each Occurrence | \$ 5,000,000 |

3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:

- | | | |
|----|--------------------------|--------------|
| a. | Bodily Injury: | |
| | Each Person | \$ 1,000,000 |
| | Each Accident | \$ 1,000,000 |
| b. | Property Damage: | |
| | Each Accident | \$ 1,000,000 |
| c. | Combined Single Limit of | \$ 1,000,000 |

4. The Contractual Liability coverage required by paragraph 5.04.B.4 of the General Conditions shall provide coverage for not less than the following amounts:

- | | | |
|----|------------------|--------------|
| a. | Bodily Injury: | |
| | Each Person | \$ 2,000,000 |
| | Each Accident | \$ 2,000,000 |
| b. | Property Damage: | |
| | Each Accident | \$ 2,000,000 |
| | Annual Aggregate | \$ 2,000,000 |

5. Additional Insured: Hyde County, North Carolina, Engelhard Sanitary District and Quible & Associates, P.C. Provide certificates for Contractor, Owner and Engineer with required encorsements.

6. Agent that fills out the Insurance Certificate shall state that they have read specification pages GC-18, 19, 20, 21, and 22, as well as pages SC-2 and 3 in regards to insurance, and that the policy issued complies with the requirements stated in these conditions.

SC-5.11. Add the following new paragraph immediately after Paragraph 5.10:

5.11 Hold Harmless

- A. Contractor agrees to protect, defend, indemnify and hold Owner, its officer, employees and agents free, including the Engineer, harmless from and against any and all losses, penalties, damages, settlement costs, charges, professional fees or other expenses or liabilities of every kind and arising out of or relating to any and all claims, liens, demands, obligations, actions, proceedings, or causes of action of every kind in connection with or arising out of this agreement and/or the performance hereof that are due to the negligence of the Contractor, its officer, employees, or agents. The Contractor further agrees to investigate, handle, respond to, provide defense for and defend the same at its sole expense and agrees to bear all other costs and expenses related thereto.

SC-6.05.C. Amend the paragraph by making two subparagraphs under the title C. Engineer's Evaluation. The paragraph text is retitled, 6.05.C.2 After Effective Date of Agreement. A new paragraph is added before this paragraph to read as follows:

1. During Bidding. The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or "or-equal" materials and equipment as defined in paragraph 6.05 of the General Conditions, or those substitute materials and equipment approved by the Engineer and identified by Addendum. The materials and equipment described in the Bidding Documents establish a standard of required type, function, and quality to be met by any proposed substitute or "or-equal" item. Request for Engineer's clarification of materials and equipment considered "or-equal" prior to the Effective Date of the Agreement must be received by the Engineer at least 5 days prior to the date for receipt of Bids. No item of material or equipment will be considered by Engineer as a substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each request shall conform to the requirements of Paragraph 6.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon the Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any proposed substitute item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.
2. After Effective Date of Agreement Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 6.05.A and 6.05.B. Engineer will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or-equal." Engineer will advise Contractor in writing of any negative determination.

SC-6.06 Add a new paragraph immediately after Paragraph 6.06.G:

H. The Contractor shall not award work valued at more than fifty (50%) percent of the Contract Price to Subcontractor(s), without prior written approval of the Owner. Justification must be submitted by the Contractor to the Engineer for recommendations and forwarding to Owner. The Owner's refusal to allow an increase in the percent subcontracted will not be grounds for increasing the Contract Price.

SC-6.13. Add the following new paragraph immediately after Paragraph 6.13.D:

E. The Contractor shall be responsible for all safety at the job site and shall comply with OSHA Regulations for all work associated with this project.

SC-7.02.A.1. Delete paragraphs 7.02.A.1-3 in their entirety and insert the following:

1. The Contractor shall have the authority and be responsible for coordination of the activities among the other Prime Contractors and Subcontractors on the Site to ensure a safe, efficient working environment. This authority covers scheduling delivery of materials, storage of materials, sequencing of construction involving different crafts, resolving interface issues between crafts, scheduling testing, and all other aspects of the Work that do not impact the design or function of the Work.

SC-9.03.A. Add the following language at the end of paragraph 9.03.A:

The Engineer will provide Resident Project Representative services for this project. The Duties, Responsibilities, and Limitations of Authority of the Resident Project Representative will be as stated in Exhibit D of the Agreement Between Owner and Engineer, E-510, 2002 Edition, as amended and executed for this specific Project.

SC -12.03.E. Add the following new paragraph immediately after paragraph 12.03.E:

When establishing the contract time, an allowance will be made for four (4) calendar days of work lost per month due to inclement weather conditions. The Contractor, at the time of each periodic pay request, shall submit to the Engineer and Owner for approval a list of all working days lost due to either inclement weather or site conditions caused by inclement weather for the period. Accompanying his list should be a summary of the specific conditions which caused the loss. This request will be reviewed by the Engineer in light of observations made by the Engineer and resident inspector. Approval of the periodic payment estimate by the Engineer, Owner, and Agency will also include approval of the weather delay request. After substantial completion, and not until then, a change order must be executed if a time extension for weather related delays is requested by the Contractor. The time extension must be based solely on the time requested within the periodic payment estimates. Subtracted from this time will be the four (4) days per month allowance assumed in the contract. There cannot be a decrease in contract length if the allowance for inclement weather exceeds the actual number of days lost due to inclement weather. To convert working days into calendar days, multiply the working days by seven (7) and divide by the number of working days in a typical work week.

SC-14.02.A.3 Add the following language at the end of paragraph 14.02.A.3:

No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage, or invest the retainage for the benefit of the Contractor.

SC-14.02.C.1. Delete Paragraph 14.02.C.1 in its entirety and insert the following in its place:

1. The Application for Payment with Engineer's recommendations will be presented to the Owner and Agency for consideration. If both the Owner and Agency find the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph 14.02.D will become due ten days after the Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.

SC-14.05.A. Add the following new paragraph at the end of paragraph 14.05.A.4:

5. Such taking possession or use will not be deemed an acceptance of any Work not completed in accordance with the Contract documents. Owner's use of any facilities so identified in the Contract Documents will not be grounds for extension of the Contract Time or change in the Contract Price. Owner's use of any facilities not specifically identified in the Contract Documents will be in accordance with conditions agreed to prior to such use, and any extra costs or delays in completion incurred and properly claimed by Contractor will be equitably adjusted with a Change Order.

SC-18.06.A. Add the following new paragraph at the end of paragraph 18.06.A.:

B. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area are 10%. The attached Minority Business Contract Provisions at the end of this section shall become a part of these contract documents.

SC-18.08 Delete paragraph 18.08.A in its entirety and insert the following in its place:

A. If this Contract exceeds \$100,000, the Contractor shall comply with all applicable standards, orders, or requirements issued under Section 306 of the Clean Air Act (42 USC §1857(h)), Section 508 of the Clean Water Act (33 USC §1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15).

SC-18.13 Add the following new paragraph immediately after paragraph 18.12:

18.13 Davis-Bacon and Related Acts

A. During the performance of the Work under this Contract the Contractor must abide by the Labor Standards Provisions of the Davis-Bacon and Related Acts.

1. Wage Determinations. Refer to the attached Wage Determination.

SC-19 Add the following Article 19 – Permits: The Contractor shall obtain all required permits for this project at no additional cost to the Owner. The Contractor shall pay any associated fees for required permits. Required permits shall include, but not be limited to, the following:

19.1. Hyde County Business License

MINORITY BUSINESS CONTRACT PROVISIONS (CONSTRUCTION)

APPLICATION:

The **Guidelines for Recruitment and Selection of Minority Businesses for Participation in State Construction Contracts** are hereby made a part of these contract documents. These guidelines shall apply to all contractors regardless of ownership. Copies of these guidelines may be obtained from the Department of Administration, State Construction Office, (physical address) 301 North Wilmington Street, Suite 450, NC Education Building, Raleigh, North Carolina, 27601-2827, (mail address) 1307 Mail Service Center, Raleigh, North Carolina, 27699-1307, phone (919) 807-4100, Website: <http://www.nc-sco.com>

MINORITY BUSINESS SUBCONTRACT GOALS:

The goals for participation by minority firms as subcontractors on this project have been set at 10%.

The bidder must identify on its bid, the minority businesses that will be utilized on the project with corresponding total dollar value of the bid and affidavit (Affidavit A) listing good faith efforts **or** affidavit (Affidavit B) of self-performance of work, if the bidder will perform work under contract by its own workforce, as required by G.S. 143-128.2(c) and G.S. 143-128.2(f).

The lowest responsible, responsive bidder must provide Affidavit C, that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the applicable goal.

OR

Provide Affidavit D, that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, **with documentation of Good Faith Effort, if the percentage is not equal to the applicable goal.**

OR

Provide Affidavit B, which includes sufficient information for the State to determine that the bidder does not customarily subcontract work on this type project.

The above information must be provided as required. Failure to submit these documents is grounds for rejection of the bid.

MINIMUM COMPLIANCE REQUIREMENTS:

All written statements, affidavits or intentions made by the Bidder shall become a part of the agreement between the Contractor and the State for performance of this contract. Failure to comply with any of these statements, affidavits or intentions, or with the minority business Guidelines shall constitute a breach of the contract. A finding by the State that any information submitted either prior to award of the contract or during the performance of the contract is inaccurate, false or incomplete, shall also constitute a breach of the contract. Any such breach may result in termination of the contract in accordance with the termination provisions contained in the contract. It shall be solely at the option of the State whether to terminate the contract for breach.

In determining whether a contractor has made Good Faith Efforts, the State will evaluate all efforts made by the Contractor and will determine compliance in regard to quantity, intensity, and results of these efforts. Good Faith Efforts include:

- (1) Contacting minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor or available on State or local government maintained lists at least 10 days before the bid or proposal date and notifying them of the nature and scope of the work to be performed.
- (2) Making the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bid or proposals are due.
- (3) Breaking down or combining elements of work into economically feasible units to facilitate minority participation.
- (4) Working with minority trade, community, or contractor organizations identified by the Office for Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- (5) Attending any prebid meetings scheduled by the public owner.
- (6) Providing assistance in getting required bonding or insurance or providing alternatives to bonding or insurance for subcontractors.
- (7) Negotiating in good faith with interested minority businesses and not rejecting them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- (8) Providing assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisting minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- (9) Negotiating joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- (10) Providing quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

APPENDIX E

MBE DOCUMENTATION FOR CONTRACT PAYMENTS

Prime Contractor/Architect: _____

Address & Phone: _____

Project Name: _____

Pay Application #: _____ Period: _____

The following is a list of payments made to Minority Business Enterprises on this project for the above-mentioned period.

MBE FIRM NAME	* INDICATE TYPE OF MBE	AMOUNT PAID THIS MONTH	TOTAL PAYMENTS TO DATE	TOTAL AMOUNT COMMITTED

*Minority categories: Black, African American (B), Hispanic (H), Asian American (A), American Indian (I), Female (F), Social and Economically Disadvantage (D)

Date: _____ Approved/Certified By: _____

Name

Title

Signature

SUBMIT WITH EACH PAY REQUEST & FINAL PAYMENT

**COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG)
CONTRACT PROVISIONS FOR PUBLIC WORKS CONTRACTS**

CDBG CONTRACT PROVISIONS

- A. GENERAL. The following Contract Provisions are required to be included in CDBG construction contracts by the North Carolina Department of Commerce, which administers the North Carolina CDBG Program. Certain provisions apply only to contracts over a certain value, and those values are noted where applicable. The legal authority for these requirements is contained in state and federal legislation applying to construction work funded by federal grants-in-aid. These provisions are binding upon the Contractor and Owner during the performance of the construction work covered by these contract documents, and form a part of the executed contract between the Contractor and Owner. The Contractor is asked to pay particular attention to the minimum wages required to be paid to employees during the performance of this work, as required by the Davis-Bacon Act (40 USC 276A to A-7). Appropriate wage decisions for this project have been determined by the Department of Labor, and are attached to this section of the contract documents (see Attachment I).
- B. NONDISCRIMINATION CLAUSE. It is specifically agreed as part of the consideration of the signing of this contract that the parties hereto, their agents, officials, employees, or servants will not discriminate in any manner on the basis of race, color, creed, sex, or national origin with reference to the subject matter of this contract, no matter how remote. This provision shall be enforced by action for specific performance, injunctive relief, or other remedy as the law may provide; and this provision shall be construed in such manner as to prevent and eradicate all discrimination based on race, color, creed, sex, or national origin.
- C. CONFLICT OF INTEREST AND ANTI-LOBBYING. The Contractor represents and certifies as part of this Agreement that (1) he has not employed or retained any company or person (other than a full-time, bona fide employee working solely for the Contractor) to solicit or secure this contract; (2) he has not paid or agreed to pay any company or person (other than a full-time bona fide employee working solely for the Contractor) any fee, commission, percentage, or brokerage fee contingent upon or resulting from the award of this contract; and (3) agrees to furnish information relating to (1) and (2) above, as requested by the Owner.

No member, officer, or employee representing the Owner, or its agents, no member of the Owner's governing body, and no other public official representing the Owner who exercises any functions or responsibilities during his tenure or for one year thereafter, shall have any financial interest, direct or indirect, in this contract or any subcontracts thereof, or the proceeds thereof, for work to be performed in connection with this contract. Immediate family members of said members, officers, employees, and officials are similarly barred from having any financial interest in this contract.

No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal Grant, the making of any Federal loan, the entering into of any cooperative, agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

If any funds other than Federal appropriated funds have been paid or will be paid any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

The preceding two paragraphs are a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U. S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

- D. LEGAL REMEDIES PROVISIONS. OMB Circular A-102, Attachment O, requires that all CDBG construction contracts contain provisions or conditions which will allow for administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as may be appropriate. The Owner and Contractor are referred to the General Provisions of these Contract Documents, which contain detailed provisions concerning breach of contract and remedies for breach of contract.
- E. TERMINATION PROVISIONS (Applies Only to Contracts Over \$10,000). OMB Circular A-102, Attachment O, requires that all CDBG construction contracts in excess of \$10,000 contain suitable provisions for termination by the Owner including the manner by which it will be effected and the basis for settlement. In addition, such contracts shall describe conditions under which the contract may be terminated for default as well as conditions where the contract may be terminated because of circumstances beyond the control of the Contractor.

The Owner and Contractor are referred to the General Provisions of these contract documents, which contain detailed provisions concerning termination of the contract.

- F. AGE DISCRIMINATION. The Contractor shall be bound by the following requirements of the Age Discrimination Act of 1975, as amended, during the performance of the work covered by these contract documents:

Section 4:

1. It shall be unlawful for an employer -
 - a. to fail or refuse to hire or to discharge any individual or otherwise discriminate against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's age;
 - b. to limit, segregate, or classify his employees in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's age; or
 - c. to reduce the wage rate of any employee in order to comply with this Act.

2. It shall be unlawful for an employment agency to fail or refuse to refer for employment, or otherwise to discriminate against, any individual because of such individual's age, or to classify or refer for employment any individual on the basis of such individual's age.
3. It shall be unlawful for a labor organization -
 - a. to exclude or to expel from its membership or otherwise to discriminate against, any individual because of his age;
 - b. to limit, segregate, or classify its membership, or to classify or fail or refuse to refer for employment any individual, in any way which would deprive or tend to deprive any individual of employment opportunities, or would limit such employment opportunities or otherwise adversely affect his status as an employee or as an applicant for employment, because of such individual's age;
 - c. to cause or attempt to cause an employer to discriminate against an individual in violation of this section.
4. It shall be unlawful for any employer to discriminate against any of his employees or applicants for employment, for an employment agency to discriminate against any individual, or for a labor organization to discriminate against any member thereof or applicant for membership, because such individual member, or applicant for membership, has opposed any practice made unlawful by this section, or because any individual, member, or applicant for membership has made a charge, testified, assisted, or participated in any manner in an investigation, proceeding, assisted, or participated in any manner in an investigation, proceeding, or litigation under this Act.
5. It shall be unlawful for an employer, labor organization, or employment agency to print or publish, or cause to be printed or published, any notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by such a labor organization, or relating to any classification or referral for employment by such an employment agency, indicating any preference, limitation, specification, or discrimination, based on age.
6. It shall not be unlawful for an employer, employment agency, or labor organization -
 - a. to take any action otherwise prohibited under subsection 1., 2., 3., or 5., of this section where age is bona fide occupational qualification reasonably necessary to the normal operation of the particular business, or where the differentiation is based on reasonable factors other than age;
 - b. to observe the terms of a bona fide seniority system or any bona fide employee benefit plan such as retirement, pension, or insurance plan, which is not a subterfuge to evade the purpose of this Act, except that no such employee benefit plan shall excuse the failure to hire any individual, and no such seniority system or employee benefit plan shall require or permit the

involuntary retirement of any individual specified by Section 12(a) of this Act because of the age of such individual.

- G. **HANDICAP DISCRIMINATION.** The Contractor shall comply with the following requirement of Section 504 of the Rehabilitation Act of 1973, as amended, during the performance of the work covered by these contract documents:

Nondiscrimination on the Basis of Handicap: No qualified handicapped person shall, on the basis on handicap be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity which receives or benefits from federal financial assistance.

- H. **EXECUTIVE ORDER 11246 CLAUSE (Applies only to Contracts Over \$10,000).** During the performance of the work covered by these contract documents, the Contractor agrees as follows:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.
2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
3. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the Contractors' commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
5. The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

6. In the event of the Contractor's noncompliance with the non-discrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rules, regulations, or order of the Secretary of Labor, or as otherwise provided by law.
7. The Contractor will include the provisions of Paragraphs (A) through (G) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event the Contractor becomes involved in, or is threatened with litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor may request the United States to enter into such litigation to protect the interest of the United States.

I. SECTION 3 AFFIRMATIVE ACTION CLAUSE

1. The work to be performed under this contract is on a project assisted under a program providing direct Federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u. Section 3 requires that to the greatest extent feasible opportunities for training and employment be given lower income residents of the project area and contracts for work in connection with the project be awarded to business concerns which are located in, or owned in substantial part by persons residing in the area of the project.
2. The parties to this contract will comply with the provisions of said Section 3 and the regulations issued pursuant thereto by the Secretary of Housing and Urban Development set forth in 24 CFR 135, and all applicable rules and orders of the Department issued thereunder prior to the execution of this contract. The parties to this contract certify and agree that they are under no contractual or other disability which would prevent them from complying with these requirements.
3. The Contractor will send to each labor organization or representative of workers with which he has a collective bargaining agreement or other contract or understanding, if any, a notice advising the said labor organization or workers' representative of his commitments under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.
4. The Contractor will include this Section 3 clause in every subcontract for work in connection with the project and will, at the direction of the applicant for or recipient of Federal financial assistance, take appropriate action pursuant to the subcontract

upon a finding that the subcontractor is in violation of regulations issued by the Secretary of Housing and Urban Development, 24 CFR 135. The Contractor will not subcontract with any subcontractor where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR 135 and will not let any subcontract unless the subcontractor has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.

5. Compliance with the provisions of Section 3, the regulations set forth in 24 CFR 135, and all applicable rules and orders of the Department issued thereunder prior to the execution of the contract, shall be a condition of the Federal financial assistance provided to the project, binding upon the applicant or recipient for such assistance, its successors and assigns. Failure to fulfill these requirements shall subject the applicant or recipient, its Contractors and subcontracts, its successors, and assigns to those sanctions specified by the grant or loan agreement or contract through which Federal assistance is provided, and to such sanctions as are specified by 24 CFR 135.

NOTE: The Contractor will be required to submit a Section 3 Affirmative Action Plan to the Owner prior to commencement of work. A sample Section 3 Plan is attached to this section of the contract documents. (See Attachment II).

- J. COPELAND "ANTI-KICKBACK" ACT PROVISION. OMB Circular A-102, Attachment O, requires that all CDBG construction contracts include a provision for compliance with the Copeland "Anti-Kickback" Act (18 USC 874) as supplemented in Department of Labor regulations (29 CFR, Part 3). This Act provides that the Contractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he is otherwise entitled. The Owner shall report all suspected or reported violations to the grantor agency.

The Copeland Act Provisions are included in the Federal Labor Standards Provisions for CDBG programs, included as Attachment III to this section of the contract documents, and which form a portion of these contract documents and the executed contract between the Owner and Contractor.

- K. DAVIS-BACON ACT PROVISION (Applies Only to Contracts Over \$2,000). OMB Circular A-102, Attachment O, requires that all CDBG construction contracts in excess of \$2,000 include a provision for compliance with the Davis-Bacon Act (40 USC 276a to a-7) as supplemented by Department of Labor regulations (29 CFR Part 5). Under this Act the Contractor shall be required to pay wages to laborers and mechanics at a rate not less than the minimum wages specified in a wage determination made by the Secretary of Labor. In addition, the Contractor shall be required to pay wages not less often than once a week. The Owner shall report all suspected or reported violations to the grantor agency.

Davis-Bacon Act provisions are included in the Federal Labor Standards Provisions for CDBG programs, included as Attachment III to this section of the contract documents, and which form a portion of these contract documents and the executed contract between the Owner and Contractor. Appropriate wage decisions for this project are included as Attachment I to this Section.

- L. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT PROVISION (Applies Only to Contracts Over \$100,000). OMB Circular A-102, Attachment O, requires that all CDBG construction contracts in excess of \$100,000 include a provision for compliance with sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 USC 327-330) as supplemented by Department of Labor regulations (29 CFR, Part 5). Under Section 103 of the Act, the Contractor and all Subcontractors shall be required to compute the wages of every mechanic and laborer on the basis of a standard workweek of 40 hours. Work in excess of the standard workday or workweek is permissible provided that the worker is compensated at a rate of not less than 1-1/2 times the basic rate of pay for all hours worked in excess of 40 hours in the workweek. (See U.S. Department of Labor Memorandum No. 143 in Attachment III.) Section 107 of the Act is applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction, safety, and health standards promulgated by the Secretary of Labor.

Specific contract requirements concerning this provision are included in the Federal Labor Standards Provisions for CDBG programs, included as Attachment III to this section of the Contract Documents, and which form a portion of these contract documents and the executed contract between the Owner and Contractor.

- M. ACCESS TO RECORDS AND RECORD RETAINAGE CLAUSE. In general, all official project records and documents must be maintained by the Owner and Contractor during the operation of this project and for a period of five years following close out in compliance with 15 NCAC 13L Rule .0911, Recordkeeping.

The North Carolina Department of Natural Resources and Community Development, the North Carolina Department of the Treasurer, U.S. Department of Housing and Urban Development, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers and records of the Owner and Contractor which are pertinent to the execution of this project, for the purpose of making audits, examinations, excerpts and transcriptions in compliance with the above Rule.

- N. CLEAN WATER, CLEAN AIR, E.O. 11738 AND EPA REGULATIONS PROVISION (Applies Only to Contracts Over \$100,000).

Compliance with Air and Water Acts. This contract is subject to the requirements of the Clean Air Act, as amended, 42 USC 1857 et seq., the Federal Water Pollution Control Act, as amended, 33 USC 1251 et seq., and the regulations of the Environmental Protection Agency with respect thereto, at 40 CFR, Part 15, as amended from time to time.

The Contractor and any of its subcontractors for work funded under this contract which is in excess of \$100,000, agree to the following requirements:

1. A stipulation by the Contractor or subcontractors that any facility to be utilized in the performance of any nonexempt contract or subcontract is not listed on the List of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 CFR 15.20.

2. Agreement by the Contractor to comply with all the requirements of Section 114 of the Clean Air Act, as amended (42 USC 1857c-8) and Section 308 of the Federal Water Pollution Control Act, as amended, (33 USC 1318) relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.
3. A stipulation that as a condition for the award of the contract prompt notice will be given of an notification received from the Director, Office of Federal Activities, EPA, indicating that a facility utilized or to be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.
4. Agreement by the Contractor that he will include or cause to be included the criteria and requirements in paragraph (1) through (4) of this section in every nonexempt subcontract and requiring that the Contractor will take such action as the Government may direct as a means of enforcing such provisions.

In no event shall any amount of the assistance provided under this agreement be utilized with respect to a facility which has given rise to a conviction under Section 113(c) (1) of the Clean Air Act or Section 309(c) of the Federal Water Pollution Control Act.

**ATTACHMENT I
WAGE DETERMINATION**

General Decision Number: NC100009 03/12/2010 NC9

Superseded General Decision Number: NC20080009

State: North Carolina

Construction Type: Heavy

Counties: North Carolina Statewide.

SEWER AND WATER CONSTRUCTION PROJECTS, AND HEAVY CONSTRUCTION
PROJECTS (does not include dam construction projects)

Modification Number	Publication Date
0	03/12/2010

SUNC1990-012 02/12/1990

	Rates	Fringes
Bricklayer.....	\$ 7.25	
Carpenter.....	\$ 7.25	
Cement mason.....	\$ 7.25	
Electrician.....	\$ 8.56	
Ironworker.....	\$ 8.20	
Laborers:		
_Air drill operator.....	\$ 7.25	
_Aspphalt raker.....	\$ 7.25	
_General.....	\$ 7.25	
_Pipelayer.....	\$ 7.25	
Millwright.....	\$ 7.25	
Painter.....	\$ 7.25	
Plumber/pipefitter		
.....	\$ 7.42	
Power equipment operators:		
_Aspphalt distributor.....	\$ 7.25	
_Aspphalt finisher.....	\$ 7.25	
_Aspphalt paver.....	\$ 7.25	
_Aspphalt screed.....	\$ 7.25	
_Backhoe.....	\$ 7.25	
_Boring machine.....	\$ 7.25	
_Bulldozer.....	\$ 7.25	
_Crane.....	\$ 7.60	
_Dragline.....	\$ 7.25	
_Drill.....	\$ 7.25	
Loader.....	\$ 7.25	
_Mechanic.....	\$ 7.25	
_Motor grader.....	\$ 7.25	
_Roller.....	\$ 7.25	
_Scraper-pan.....	\$ 7.25	

_Tractor.....\$ 7.25
 _Trenching.....\$ 7.25
 _Well driller.....\$ 7.25

Truck driver.....\$ 7.25

Boilermakers:

_All other work.....\$ 16.20 4.105
 _Storage tank
 erection/repair.....\$ 12.96 4.105

Fence Installers.....\$ 7.25

MANHOLE BUILDER.....\$ 7.25

TV & Grouting Technicians.....\$ 9.21

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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 Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

 In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====
END OF GENERAL DECISION

ATTACHMENT II
SECTION 3 AFFIRMATIVE ACTION PLAN

SECTION 3 AFFIRMATIVE ACTION PLAN

A. Name
Contract Number
Location
Section 3 Area

B. Company Name and Address:

C. Utilization Plan for Section 3 Area Residents as Employees

1. Trainees:

Trainee Categories on this Project (list each type)	Number of Trainees Needed for Project	Trainees to be Hired	Goal for Sec. 3 New Hires

2. Non-Trainee Employees:

*Job Categories on this Project (list each job type)	Number of Employees Required	Number Already Employed (Permanent)	Vacancies to be Filled	Goal for Sec. 3 New Hires

* List by major job category, e.g., administrative, technical, semitechnical, maintenance, skilled, semiskilled, unskilled, or as appropriate, and by specific occupation or trade.

3. Affirmative Action

- a. A notice will be send to each labor organization or representative of workers with which _____ has a collective bargaining agreement or other contract or understanding, if any, informing them of the commitment to hire lower-income project area residents as trainees and employees during the term of this contract.
- b. A copy of the notice to each labor organization or representative of workers will be posted in conspicuous places available to employees and applicants for employment or training.
- c. _____ will attempt to recruit lower-income residents from the project area(s) by using the following means: (List and identify by name below: e.g., local advertising media; signs placed at the project; community organizations; public and private institutions, etc.)
- d. A list will be kept of all lower-income area residents applying for jobs; records will be maintained indicating their qualifications and the actions taken; and qualified persons will remain on the active applicant list for the first available opening during the term of this project.
- e. The Section 3 clause shall be incorporated in every subcontract, and no subcontract shall be executed until the subcontractor has first provided _____ with a statement of ability to comply with the Section 3 regulations.

D. Utilization Plan for Businesses Located in Section 3 Area

1. Goals:

*Subcontracts to be Let and Supplies to be Purchased Locally	Dollar Amount	Eligible Business in Project Area?		Dollar Goal for Eligible Businesses
		Yes	No	

*List by type, service, or profession.

2. Affirmative Action

_____ hereby assures that to the greatest extent feasible, subcontracts for work to be performed in connection with this project will be awarded to small business concerns located within the Section 3-covered project area or small business concerns owned in substantial part (51% or more) by persons residing in the Section 3-covered project area. To that effect, _____ will:

- a. Insert our Section 3 Affirmative Action Plan in our bid documents.
- b. Identify in our bid documents the applicable Section 3 project area.
- c. Notify the appropriate Section 3 project area small business concerns of pending contractual opportunities.
- d. Notify community organizations, associations representing "socially and/or economically disadvantaged" small business concerns, and public or private institutions operating within or serving the project area when contractual opportunities are available.
- e. Fully disseminate information concerning contractual opportunities by informing and discussing such opportunities with local, community, or project area resources, and by advertising in news media, specifically including minority and community news media.
- f. Maintain a listing or file of Section 3-eligible business concerns referred to us by any individual or organization, or with whom we have previously contracted.
- g. Take steps to ensure that subcontracts which are typically let on a negotiated, rather than a bid, basis other than Section 3-covered project areas are also let on a negotiated basis, whenever feasible, when let in this Section 3 project area.
- h. Where competitive bids are solicited, require the bidders to submit their utilization goals and their Section 3 Affirmative Action Plans for accomplishing their goals. Evaluate each bid to determine its responsiveness and whether the proposed Section 3 Affirmative Action Plan will accomplish the stated goals.
- i. Insert the following statement in negotiation documents of subcontractors:

"Under Section 3 of the Housing and Urban Development Act of 1968, as amended, _____ and its subcontractors are committed to filling trainee positions, as well as vacant employment positions with qualified lower-income residents of the Section 3 project area, and to utilizing eligible small businesses and entrepreneurs located within the Section 3-covered project area or business concerns owned in substantial (51% or more) part by persons residing in the Section 3-covered area."
- j. Keep records of all actions taken regarding the utilization of eligible small businesses and entrepreneurs in the Section 3-covered project area.

E. All reports, records, and documents relating to the implementation of this Section 3 Plan will be open and available for inspection to authorized representatives of the town/city/county and Federal governments during the hours of _____, Monday through Friday, at _____.

F. _____ will provide whatever information is required to document its compliance with the Section 3 regulations.

_____ has identified _____, whose position in the company is _____, as the officer responsible for Section 3 compliance.

Signed: _____ (Title)

Date: _____

**ATTACHMENT III
FEDERAL LABOR STANDARDS PROVISIONS
FOR CDBG CONSTRUCTION CONTRACTS
(http://www.hudclips.org/sub_nonhud/html/forms.htm)**

DIVISION 2

SITE WORK

SECTION 02110 - SITE CLEARING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, and general provisions of Contract, including general and Supplementary Conditions and Division 1, Specification Sections apply to this Section.

1.02 SUMMARY

- A. This Section includes, but is not limited to the following:
 - 1. Furnish all plant, labor, equipment, and material to perform all operations in connection with the clearing, grubbing, tree removal, pavement removal, and obstruction removal required for the construction of the Work.

1.03 PROJECT CONDITIONS

- A. Traffic:
 - 1. Conduct site clearing operations to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks or other occupied or used facilities without permission from the Owners or NCDOT.
- B. Protection of Existing Improvements:
 - 1. Provide protections necessary to prevent damage to existing improvements indicated to remain in place.
 - 2. Restore damaged improvements to their original condition, as acceptable to property owners.
- C. Protection of Existing Trees and Vegetation:
 - 1. Protect existing vegetation indicated to remain in place during preconstruction meeting, or outside the limits of grading, against unnecessary cutting, breaking or skinning of roots. Provide adequate temporary guards to protect trees and vegetation to be left standing.
 - 2. Repair or replace vegetation damaged by construction operations, in a manner acceptable to the Owner.
 - 3. Replace vegetation which cannot be repaired and restored to full-growth status, as determined by Owner.

PART 2 - PRODUCTS

Not applicable to this Section.

PART 3 - EXECUTION

3.01 SITE CLEARING

A. General

1. Remove trees, shrubs, grass and other vegetation, improvements, or other obstructions as required to permit installation of new construction. Remove similar items elsewhere on site or premises as specifically indicated. "Removal" includes digging out and off-site disposing of stumps and roots.
2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner, where such roots and branches obstruct installation of new construction.

B. Trees and Shrubs

1. Trees, exposed roots, stumps, brush and other material above grade which adversely affect construction, or as shown, shall be removed and disposed of and the necessary backfill placed to restore the ground surface to original grade. Prior to clearing, the Contractor shall confirm the Owner or Engineer those trees to be removed.
2. Where ornamental trees and shrubs are found within the limits of excavation, they shall be carefully removed so as not to destroy their viability and upon completion for the Work replanted where directed by the Owner or Engineer. All ornamental trees and shrubs within the limits of construction shall be protected from damage. Where damaged, trees and shrubs shall be pruned and treated as directed. If damage is such that treatment and pruning is not acceptable, the trees or shrubs shall be replaced at the Contractor's expense.
3. Existing trees within the work area that are not required to be removed shall be protected with a suitable timber barrier. Construction materials shall not be stored within the protected barrier area.
4. Trees and shrubs outside of rights-of-way, easements and construction areas shall be protected. Those damaged during construction shall be replaced or pruned at the expense of the Contractor.

B. Pavement Removal

1. If the construction activity traverses paved areas, the pavement shall be removed by the Contractor. The area of pavement removed shall be as small as practical but shall provide at least six inches of undisturbed earth between the excavation and pavement left in place. Cuts in pavement shall be made or trimmed to neat straight edges with undamaged pavement left in place.
2. Follow NCDOT permit if work is within NCDOT rights-of-way.

C. Removal of Obstructions

1. Obstructions such as boulders, paved ditch, sidewalk, curb and gutter, mail boxes, street signs, etc. shall be removed or relocated by the Contractor as

required for the construction of the Work. The Contractor shall either dispose of or stockpile these materials as directed by the Owner or his Engineer. Items to be reinstalled after construction shall be removed, carefully handled and stored by the Contractor. After construction, he shall return them to their original location and condition.

D. Site Drainage

1. Contractor to maintain positive drainage throughout the Site Clearing operation so as to avoid standing water on work surfaces.

3.02 DISPOSAL OF WASTE MATERIALS

A. Burning

1. Burning is permitted if allowed by local authorities. Contractor is responsible for obtaining any local burning permits.

B. Removal of Materials

1. Remove any waste materials, unsuitable soil material, or excess topsoil material from property and dispose of in a legal manner.

END OF SECTION 02110

SECTION 02200ww - EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Preparing of subgrade for tanks.
 - 2. Excavating and backfilling of trenches for gravity sewer lines and force mains
 - 3. Excavating and backfilling for underground mechanical and electrical utilities and buried mechanical and electrical appurtenances.
- B. Final Grading.

1.3 DEFINITIONS

- A. Excavation: Excavation consists of removal of material encountered to subgrade elevations indicated and subsequent stockpiling of materials removed in locations designated by Owner.
- B. Unauthorized Excavation: Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction of Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, shall be at Contractor's expense.
 - 1. Backfill and compact unauthorized excavations as specified for authorized excavations of same classification, unless otherwise directed by Engineer.
- C. Subgrade: The undisturbed earth or the compacted soil layer immediately below granular subbase at tanks and trenches.
- D. Structure: Buildings, foundations, slabs, tanks, curbs, or other man-made stationary features occurring above or below ground surface.

1.4 QUALITY ASSURANCE

- A. Codes and Standards: Perform excavation work in compliance with applicable requirements of authorities having jurisdiction and in accordance with permit conditions.

1.5 PROJECT CONDITIONS

- A. Existing Utilities: Locate existing underground utilities in areas of excavation work. If utilities are indicted to remain in place, provide adequate means of support and protection

during earthwork operations. Call North Carolina One Call 800-632-4949.

1. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult utility owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
 2. Do not interrupt existing utilities serving facilities occupied by Owner or others, during occupied hours, except when permitted in writing by Engineer and then only after acceptable temporary utility services have been provided.
 3. Provide minimum of 48-hour notice to Engineer and Owner and receive written notice to proceed before interrupting any utility.
 4. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies for shutoff of services if lines are active.
- B. Use of Explosives:
1. Use of explosives is not permitted.
- C. Protection of Persons and Property:
1. Barricade open excavations occurring as part of this work and post with warning lights.
 2. Operate warning lights as recommended by authorities having jurisdiction.
 3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
 4. Perform excavation by hand within dripline of large trees to remain. Protect root systems from damage or dryout to the greatest extent possible. Maintain most condition for root system and cover exposed roots with moistened burlap.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. Fill Material: Satisfactory soil materials free of clay, rock, or gravel larger than 2" in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
1. Satisfactory soil materials are defined as those complying with ASTM D2487 soil classification groups GW, GP, GM, SM, SW, and SP.
- B. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, crushed slag, and natural or crushed sand.

PART 3 - EXECUTION

3.1 EXCAVATION

- A. Excavation is unclassified and includes excavation of all muck, rock, and other materials required to obtain subgrade elevations indicated, regardless of character of materials and obstructions encountered.
- B. Earth excavation includes excavation of pavements and other obstructions visible on surface; underground structures, utilities, and other items indicated to be demolished and removed; together with earth and other materials encountered that are not classified as rock or unauthorized excavation.

3.2 STABILITY OF EXCAVATIONS

- A. General: Comply with local codes, ordinances, and requirements of agencies having jurisdiction.
- B. Slope sides of excavations to comply with local codes, ordinances, and requirements of agencies having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. Maintain sides and slopes of excavations in safe condition until completion of backfilling.
- C. Shoring and Bracing: Provide materials for shoring and bracing, such as sheet piling, uprights, stringers, and cross braces, in good serviceable condition. Maintain shoring and bracing in excavations regardless of time period excavations will be open. Extend shoring and bracing as excavation progresses.
- D. Provide permanent steel sheet piling or pressure-treated timber sheet piling wherever subsequent removal of sheet piling might permit lateral movement of soil under adjacent structures. Cut off tops a minimum of 2 ft.-6-inches below final grade and leave permanently in place.

3.3 DEWATERING

- A. Prevent surface water and subsurface or ground water from flowing into excavations and from flooding project site and surrounding area.
 - 1. Do not allow water to accumulate in excavations. Remove water to prevent softening of excavation and foundation bottoms, undercutting footings, and soil changes detrimental to stability of subgrade and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
 - 2. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey ground water, rain water and water removed from excavations to collecting or runoff areas. Do not use trench excavations as temporary drainage ditches.

3.4 STORAGE OF EXCAVATED MATERIALS

- A. Stockpile excavated materials acceptable for backfill and fill where directed. Place, grade, and shape stockpiles for proper drainage.
 - 1. Locate and retain soil materials away from edge of excavations.

- B. Dispose of excess excavated soil material and materials not acceptable for use as backfill in legal disposal area.

3.5 EXCAVATION FOR TANKS

- A. Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10 foot, and extending a sufficient distance from bottom of tanks to permit placing and removal of gravel subbase, installation of services, and other construction and for inspection.
 - 1. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Structures: Conform to elevations and dimensions indicated within a tolerance of plus or minus 0.10 foot; plus a sufficient distance to permit placing and removal of gravel subbase, installation of services, and other construction and for inspection. Do not disturb bottom of excavations, intended for bearing surface.

3.6 TRENCH EXCAVATION FOR PIPES AND CONDUIT

- A. Excavate trenches to uniform width, sufficiently wide to provide ample working room and a minimum of 6 to 9 inches of clearance on both sides of pipe or conduit.
- B. Excavate trenches and conduit to depth indicated or required to establish indicated slope and invert elevations and to support bottom of pipe or conduit on undisturbed soil. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
- C. For pipes or conduit less than 6 inches in nominal size, and for flat-bottomed, multiple-duct conduit units, do not excavate beyond indicated depths. Hand-excavate bottom cut to accurate elevations and support pipe or conduit on undisturbed soil.
- D. For pipes and equipment 6 inches or larger in nominal size, shape bottom of trench to fit bottom of pipe for 90 degrees (bottom 1/45 of the circumference). Fill depressions with tamped sand backfill. At each pipe joint, dig bell holes to relieve pipe bell of loads to insure continuous bearing of pipe barrel on bearing surface.

3.7 COLD WEATHER PROTECTION

- A. Protect excavation bottoms against freezing when atmospheric temperature is less than 35° F.

3.8 BACKFILL AND FILL

- A. General: Place soil material in layers to required subgrade elevations, for each area classification listed below, using materials specified in part 2 of this Section.
 - 1. Under grassed areas, use satisfactory excavated or borrow material.
 - 2. Under septic and pump tanks, use subbase material.
 - 3. Under the bed system use fill material and satisfactory excavated material.

- B. Backfill excavations as promptly as work permits, but not until completion of the following:
1. Acceptance of construction below finish grade including, where applicable, dampproofing, waterproofing, and perimeter insulation.
 2. Inspection, testing, approval, and recording locations of underground utilities have been performed and recorded.
 3. Removal of shoring and bracing, and backfilling of voids with satisfactory materials. Cut off temporary sheet piling driven below bottom of structures and remove in manner to prevent settlement of the structure or utilities, or leave in place if required.
 4. Removal of trash and debris from excavation.
 5. Permanent or temporary horizontal bracing is in place on horizontally supported walls.

3.9 FILL PLACEMENT AND COMPACTION

A. Tanks:

1. Place backfill material evenly adjacent to tanks, piping, or conduit to required elevations.
2. Prevent wedging action of backfill against tanks or displacement of piping or conduit by carrying material uniformly around tank piping, or conduit to approximately same elevation in each lift.
3. Compact top 6 inches of subgrade and each layer of backfill at 90 percent maximum density.

B. Piping:

1. Backfill with clean material from excavation. Remove organic material as well as rocks and debris larger than 1-inch diameter. Place acceptable backfill material in 6" lifts, compacting each lift.

3.10 GRADING

- A. General: Uniformly grade areas within limits of grading under this Section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are indicated or between such points and existing grades.

3.11 FIELD QUALITY CONTROL

A. Quality Control During Construction:

1. All stripping of topsoil and excavation work associated with the area shall be

- under the control of Engineer and Health Department.
2. The Contractor, local health department and Engineer shall establish a program that provides the necessary field supervision and quality control monitoring and testing which may be required to meet the requirements of all site work.

3.12 EROSION CONTROL

Provide erosion control methods in accordance with Section 02270 - Erosion and Sediment Control and the North Carolina Department of Environment & Natural Resources, Land Quality Section.

3.13 MAINTENANCE

- A. Protection of Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
- B. Repair and re-establish grades in settled, eroded, and rutted areas to specified tolerances.
- C. Reconditioning Compacted Areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to required density prior to further construction.
- D. Settling: Where settling is measurable or observable at excavated areas during general project warranty period, remove surface (pavement, lawn, or other finish), add backfill material, compact, and replace surface treatment. Restore appearance, quality, and condition of surface or finish to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.14 DISPOSAL OF EXCESS AND WASTE MATERIALS

- A. Removal to Designated Areas on Owner's Property: Transport acceptable excess excavated material to designated soil storage areas on owner's property. Stockpile soil or spread as directed by Engineer.
- B. Removal From Owner's Property: Remove waste materials, including unacceptable excavated material, trash, and debris, and dispose of it off Owner's property in a legal manner.

END OF SECTION 02200ww

PART 1 - GENERAL

A. The general provisions of the Contract, including the General and Supplementary Conditions and Division 1 Specifications sections apply to work of this section.

B. North Carolina Department of Environment, Health & Natural Resources EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, dated May 1994, hereinafter referred to in this Section as the Practice Standards and Specifications.

- A. The extent of the work required under this section is that required to minimize water, air, and soil erosion and siltation.
- B. Temporary erosion control measures which may be necessary include, but are not limited to, temporary berms, dikes, dams, drainage ditches, silt basins, silt ditches, perimeter swales, slope drains, structures, vegetation, mulches, mats, netting, gravel or any other methods or devices that are necessary to control or restrict erosion. Temporary erosion control measures may include work outside the right-of-way or construction limits where such work is necessary as a result of construction such as borrow pit operations, haul roads, plant sites, equipment storage sites, and disposal of waste or debris. The Contractor shall be liable for all damages to public or private property caused by silting or slides originating in waste areas furnished by the Contractor.

1.	Site Clearing	Section 02110
2.	Earthwork	Section 02210

Not Used.

A. Furnish certification from supplier that materials are as specified.

1. North Carolina Sedimentation Pollution Control Act of 1973 and the Rules and Regulations promulgated pursuant to the provisions of said act.
2. NC Dept. of Environment, Health and Natural Resources - EROSION AND

SEDIMENT CONTROL PLANNING & DESIGN MANUAL, dated May, 1994.

3. "Standard Specifications for Roads and Structures: North Carolina Department of transportation (NCDOT).
4. In the event of conflict between the regulations listed above and the requirements of these specifications, the more restrictive requirement shall apply.

1.5 SANCTIONS

- A. Failure on the part of the Contractor to perform the necessary measures to control erosion, siltations, and pollution will result in the Engineer notifying the Contractor to take such measures. In the event that the Contractor fails to perform such measures within 24 hours after receipt of such notice, the owner may suspend the work as provided above, or may proceed to have such measures performed with other forces and equipment, or both. The cost of such work performed by other forces will be deducted from monies due the Contractor on his contract.

PART 2 - PRODUCTS

2.1 SILT FENCES:

- A. Posts: Wooden posts shall be a minimum of 4" in diameter and 6' in length. Posts shall be of creosote or pentachlorophenol treated southern pine.
- B. Steel posts shall be 5' in height and be of the self-fastener angle steel type.
- C. Posts shall be spaced at 10' max. When silt fence is backed with wire mesh, and 7' when no wire mesh is used or as required by Engineer.
- D. Woven Wire: Woven wire fencing shall conform to ASTM A116 for Class 3 galvanizing. Fabric shall be a minimum of 32" in width and shall have a minimum of 6 line wires with 12" stay spacing. The top and bottom wires shall be 20 gauge while the intermediate wires shall be 12-1/2 gauge. Wire fabric shall be fastened to wood posts with not less than #9 wire staples 1-1/2" long.
- E. Fabric: Provide woven synthetic fiber designed specifically for silt fence conforming to NCDOT specifications.

2.2 FILTER CLOTH

- A. For use under rip rap provide woven synthetic fiber with burst strength of 500 psi, permeability of 0.01 cm/sec and apparent sieve size of approximately 70 as manufactured by MIRAFI EXXON, CONTECH, TREVIARA or equal approved by Engineer.

2.3 MATTING FOR EROSION CONTROL

- A. Matting for erosion control shall be jute matting or excelsior matting. Other acceptable material manufactured especially for erosion control may be used when approved by the

Engineer in writing before being used. Matting for erosion control shall not be dyed, bleached, or otherwise treated in a manner that will result in toxicity to vegetation.

2.4 SEEDING

- A. Seeding grasses and legumes shall meet the requirements of Section 6.11 of the Practice Standards and Specifications.
- B. Use certified seed for permanent seeding. This seed shall meet published North Carolina Standards and should bear an official "Certified Seed" label.

PART 3 - EXECUTION

3.1 GENERAL

- A. The Contractor shall take whatever measures are necessary to minimize soil erosion and siltation, and water, air and noise pollution caused by his operations. The Contractor shall also comply with the applicable regulations of all legally constituted authorities relating to pollution prevention and control. The Contractor shall keep himself fully informed of all such regulations which in any manner affect the conduct of the work, and shall at all times observe and comply with all such regulations. In the event of conflict between such regulations and the requirements of the specifications, the more restrictive requirements shall apply.
- B. The Contractor shall exercise every reasonable precaution throughout the life of the project to prevent the eroding of soil and the silting of rivers, streams, lakes, reservoirs, other water impoundments, ground surfaces, or other property.
- C. Prior to suspension of operations on the project or any portion thereof, the Contractor shall take all necessary measures to protect the construction areas, including but not limited to borrow sources, soil type base course sources, and waste areas, from erosion during the period of suspension.
- D. Provide diversion ditches and berms as necessary to prevent concentrated flow of water across disturbed areas.
- E. Stockpile excavated material on the opposite side of the utility trenches from the watercourses to the extent that is possible.
- F. In the event that stockpiles are placed on the watercourse side of the trench, provide silt fence or silt berms with stone filter outlets along the entire length of the stockpile that is on the watercourse side of the trench. Upon the completion of backfilling, the measures shall be removed and the site graded to its natural grade or as shown on plans.
- G. Maintain natural buffer zones along all watercourses sufficient to retain all visible siltation within the first 25 percent of the buffer width.
- H. Provide a settling basin with a gravel filter outlet for all water pumped from trenches or dewatering equipment. Pumping of that water directly into any stream, pond, or watercourse is prohibited.
- I. Tamp, fertilize, seed and mulch the disturbed areas as soon as practicable after line is installed and, in all cases, no later than 15 working days or 30 calendar days after completion of the line segment or any phase of work including (rough or final) grading at a particular site.

- J. When construction operations are suspended for more than 15 working or 30 calendar days, provide temporary seeding and mulching of all disturbed areas including those areas in which further construction is necessary.
- K. Erosion control measures installed by the Contractor shall be acceptably maintained by the Contractor.
- L. Silt fences shall be provided where shown on the drawings and/or as necessary to prevent erosion.
- M. Catch basins shall be protected from silt by placing straw bales or silt fence around the openings until vegetative cover is established.

3.2 SILT FENCE

- A. Construct the sediment barrier of standard strength or extra strength synthetic filter fabrics.
- B. Ensure that the height of the sediment fence does not exceed 18 inches above the ground surface. (Higher fences may impound volumes of water sufficient to cause failure of the structure).
- C. Construct the filter fabric from a continuous roll cut to the length of the barrier to avoid joints. When joints are necessary, securely fasten the filter cloth only at a support post with overlap to the next post.
- D. Support standard strength filter fabric by wire mesh fastened securely to the upslope side of the posts using heavy duty wire staples at least 1 inch long, or tie wires. Extend the wire mesh support to the bottom of the trench.
- E. When the wire mesh support fence is used, space posts a maximum of 8 ft. apart. Support posts should be driven securely into the ground to a minimum of 18 inches.
- F. Extra strength filter fabric with 6' post spacing does not require wire mesh support fence. Staple or wire the filter fabric directly to posts.
- G. Excavate a trench approximately 4 inches wide and 8 inches deep along the proposed line of posts and upslope from the barrier.
- H. Backfill the trench with compacted soil or gravel placed over the filter fabric.
- I. Do not attach filter fabric to existing trees.

3.3 MAINTENANCE

- A. Inspect sediment fences at least once a week and after each rainfall. Make any required repairs immediately.
- B. Should the fabric of the sediment fence collapse, tear, decompose or become ineffective, replace it promptly. Replace burlap every 60 days.
- C. Remove sediment deposits as necessary to provide adequate storage volume for the next rain and to reduce pressure on the fence. Take care to avoid undermining the fence during

cleanout.

- D. Remove all fencing materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.

3.4 SEEDING

- A. See Drawing for seeding mixture.
- B. Seeding for erosion control shall be performed in accordance with the recommended outlined in the Practice Standards and Specifications.
- C. Soil Amendments: Apply lime and fertilizer according to soil test, or apply 3,000 - 5,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer.
- D. Mulch: Apply 4,000 lb/acre grain straw or equivalent cover of another suitable mulch. Anchor straw by tacking with asphalt, netting, or roving or by crimping with a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.
- E. All seeded areas will be fertilized, reseeded as necessary, and mulched according to these specifications to maintain a vigorous, dense vegetative cover.

3.5 WATER AND AIR POLLUTION

- A. The Contractor shall exercise every reasonable precaution throughout the life of the project to prevent pollution of rivers, streams, and water impoundments. Pollutants such as chemicals, fuels, lubricants, bitumens, raw sewage, and other harmful waste shall not be discharged into or alongside of rivers, streams, or impoundments, or into natural or manmade channels leading thereto.
- B. The Contractor shall comply with all State or local air pollution regulations throughout the life of the project.

3.6 DUST CONTROL

- A. The Contractor shall control dust throughout the life of the project within the project area and at all other areas affected by the construction of the project, including, but not specifically limited to, unpaved secondary roads, haul roads, access roads, disposal sites, borrow and material sources, and production sites. Dust control shall not be considered effective condition, public nuisance, or condition endangering the value, utility, or appearance of any property.

3.7 NOISE CONTROL

- A. The Contractor shall exercise every reasonable precaution throughout the life of the project to prevent excessive and unnecessary noise. The Contractor shall choose his methods so as to minimize the disturbance of area residents.

END OF SECTION 02270

SECTION 02555 - WATER DISTRIBUTION SYSTEM

PART 1 - GENERAL

1.01 DEFINITIONS

- A. Engineer: Shall be a professional engineer registered in North Carolina and duly authorized to act as the representative of the developer.
- B. Owner: Any person, association, partnership or corporation that owns, and/or improves or subdivides land.
- C. Contractor: Shall be the duly authorized representative of the developer responsible for installation of the water system.
- D. Abbreviations: Wherever the following abbreviations are used in these specifications or plans, they shall be construed as follows:
 - AASHTO American Association of State Highway and Transportation Officials
 - ASTM American Society of Testing and Materials
 - NCDOT Policies and Procedures for accommodating Utilities on Highway Rights of Way, State of North Carolina Department of Transportation, latest edition.
 - AWWA American Water Works Association
 - ANSI American National Standards Institute
 - NCDENR North Carolina Department of Environment and Natural Resources
 - PWSS Public Water Supply Section
- E. Inspector: The Owner's employee or the Engineer's authorized representative approved by the Owner assigned to make detailed inspections of the work.
- F. Drawings: The plans prepared by a registered Engineer showing the location, character and dimensions of the work as approved in writing by the North Carolina Department of Environment & Natural Resources.
- G. Subcontractor: An individual, partnership, firm, corporation or joint venture contracting with the Contractor or Owner to do a portion of the work or furnish materials for the work.
- H. Superintendent: The Contractor's authorized representative in charge of the work.

- I. Work: The furnishing of all labor, materials, equipment and incidentals necessary to successfully complete the project and satisfy the duties and obligations.
- J. Witness: Shall be three (3) measurements to permanent monuments at approximately ninety (90) degrees and as otherwise provided in these specifications or by the Owner. A witness will be required only when specifically requested by the Owner.
- K. Defective Work: Work that does not conform to these specifications, the approved drawings or applicable local, state or federal law.
- L. Shop Drawings: All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by Contractor, a sub-contractor, manufacturer, supplier or distributor and which illustrate the equipment, material or some portion of the work.

1.02 PROJECT CONDITIONS

A. Laws to be Observed:

- 1. The Contractor and Subcontractor must keep fully informed of all federal and state laws, local laws, ordinances, regulations and all orders and decrees of bodies having any jurisdiction or authority which, in any manner, affect those engaged or employed on the work or which, in any way, affect the conduct of the work. He shall at all times observe and comply with all such laws, ordinances, regulations, orders and decrees; and shall protect and indemnify the Owner and its representatives against any claim of liability arising from or based on the violation of any such law, ordinance, order or decree, whether by himself or his employees.

B. Permits, Licenses and Taxes:

- 1. Procure all permits and licenses; pay all charges, fees and taxes; give notices necessary for the proper and lawful prosecution of the work.

C. Protection and Restoration of Property and Landscape:

- 1. The Contractor shall be responsible for the preservation of all public and private property and shall protect carefully from disturbance or damage all land monuments and property markers until the Owner has witness or witnessed their location and shall not move them until directed.
- 2. The Contractor shall be responsible for all damage or injury, of any character, to property during the prosecution of the work, resulting from any act, omission, neglect or misconduct in his manner or method of executing the work, or any time due to defective work or materials.

D. Contractor's Responsibility for Work:

- 1. Until final written acceptance of the project by the Owner, the Contractor shall have the charge and care thereof and shall take every precaution against injury or

damage to any part thereof due to the action of the elements or from any other cause, whether arising from this execution or from the nonexecution of the work. The Contractor shall rebuild, repair, restore and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof.

2. In case of suspension of work from any cause whatever, the Contractor shall be responsible for the project and shall take such precautions as may be necessary to prevent damage to the project, provide for drainage and shall erect any necessary temporary structures, signs or other facilities at his expense.

E. Shutting off for Connections:

1. The existing water supply and fire protection systems shall not be disturbed, except as absolutely necessary. If interruption of water service to individual homes or existing mains is necessary, the Water System Operator shall be notified and only the Water System Operator shall perform any shut down operation. Special care shall be exercised where pipes are being removed and replaced with new lines. The Contractor shall carefully plan his work in order to avoid contamination and lengthy shutdowns of existing waterlines.
2. Prior to commencing work on any existing waterline, the Contractor shall furnish the Water System Operator with men and tools to enable the shut off of water in order to make connections. Existing valves shall be operated by the Water System Operator only.
3. Prior to shutting off water, the Contractor shall notify any affected property owners at least eight (8) hours prior thereto and the local Fire Department at least twenty-four (24) hours prior thereto.

F. Clean-Up:

1. All surplus construction material shall be removed from the site by the contractor; however, clean-up work, including complete trench backfill, may be delayed for testing purposes but shall be limited to single sections of pipe that can be valved off. Clean-up must be done prior to or concurrent with pipe laying operations for the next valved section.

G. Before Starting Work:

1. A preconstruction meeting will be held to review the progress schedules, to establish procedures for handling shop drawings and other items submitted in accordance with this Chapter and to establish an understanding between the parties as to the project.

The Owner, Contractor, utility companies and other interested parties may attend.

H. Access to the Work:

1. The Owner and its representatives shall, at all times, have access to the work.

The Contractor shall provide facilities for such access and observation of the work as well as inspection and testing by others.

I. Owner May Stop the Work:

1. If the work is defective or if the Contractor fails to supply sufficient skilled workmen or suitable materials or equipment, the Owner may order Contractor to stop the work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Owner to stop the work shall not give rise to any duty on the part of the Owner to exercise the right for the benefit of the Contractor or any other party.

J. Correction or Removal of Defective Work:

1. If the work has been rejected by the Owner, it must be removed from the site and replaced with nondefective work. If the Contractor does not correct such defective work or remove and replace such rejected work within a ninety (90) day period, as specified in a written notice thereof from the Owner, the Owner may have the deficiency corrected or the rejected work removed and replaced. All direct and indirect costs of such correction or removal and replacement, including compensation for additional professional services, shall be paid by the Contractor. The Contractor shall also bear the expenses of making good all work of others destroyed or damaged by the Contractor's defective work. No permits shall be issued to or approvals granted to the Contractor until all such costs have been paid to the Owner.

K. Warranty Period:

1. The Owner must approve the work, in writing, after its completion; however, such approval shall not affect or waive the Owner's warranty rights and remedies as set forth in this section. The Contractor shall warrant and guarantee all workmanship and materials against defects for a period of two (2) years after the date of final approval. The Owner may, at its selection, require the Owner to secure the warranty obligation with a Deed of Trust or other form of security satisfactory to the Owner. If any work is found to be defective during the warranty period, the Contractor shall promptly correct such defective work or, if the work has been rejected by the Owner, remove the defective material from the site and replace it with non defective materials. If the defect is such that it causes a break in the waterline or is of such a nature that, in the opinion of the Owner Water Department, impairs the operation of the water system, then the Owner may repair or replace the defective work or material or have the defective work corrected, and all direct and indirect costs thereof, including compensation for additional professional services, shall be paid by the Contractor. If the Contractor fails to pay all such costs and expenses, then the Owner may proceed against the security posted by the Owner without waiving or prejudice to any other rights, claims or remedies.

L. Verification of Existing Utilities:

1. The data given on these plans is believed to be accurate, but accuracy is not

guaranteed. The Contractor is responsible for verifying all levels, locations, types and dimensions of the existing utilities prior to construction. If a large discrepancy is found, the Engineer shall be contacted before any work continues. Work shall not proceed until Contractor is notified by Engineer to do so.

PART 2 - PRODUCTS

2.01 GENERAL

- A. All water system and waterline materials shall conform to the following specifications, and any changes shall be submitted, in writing, to and approved by the Engineer.
- B. Waterline Identification:
 - I. UNDERGROUND-TYPE PLASTIC LINE MARKERS: Manufacturer's standard permanent, bright-colored, continuous-printed plastic tape, intended for direct-burial service; not less than four inches (4") wide by four (4) mils thick. Provide blue tape with black printing reading "CAUTION WATERLINE BURIED BELOW". Marking tape shall be detectable from ground surface.

2.02 WATERLINE

- A. 8" and larger P.V.C. - only (Poly Vinyl Chloride) pipe shall conform to all requirements of AWWA Specifications C900-81 or latest edition for PVC pipe and shall be pressure rated at 150 psi with a standard dimension ratio (SDR) of 18 for both barrel and bell dimensions. Pipe shall bear the National Sanitation Foundation seal of approval and shall comply with the requirements for Type 1, Grade 1 (PVC 1120) of the ASTM resin specification D-1784-68.
- B. 6" and smaller P.V.C. - only (Poly Vinyl Chloride) pipe shall conform to requirements of ASTM D 2241 and shall be pressure rated at 200 psi with a standard dimension ratio (SDR) of 21 for both barrel and bell dimensions. Pipe shall bear the National Sanitation Foundation seal of approval and shall comply with the requirements for Type 1, Grade 1 (PVC 1120) of the ASTM resin specification D-1784-68.
- C. Ductile iron pipe shall conform to ANSI A21.51 and ASTM A536, Grade 60-42-10, Class 40. Fittings shall conform to ANSI A21.10 and have a pressure rating of 250 psi.
- D. All pipelines shall meet the size requirements of the North Carolina Department of Environment, Health and Natural Resources Public Water Supply Section.

2.03 JOINTS

- A. P.V.C.: Pipe shall be joined by means of a rubber ringbell joint which shall be an integral and homogeneous part of the pipe barrel.
- B. Iron: Pipe shall be joined by means of mechanical or push-on joints in accordance with ANSI A21.11.

2.04 FITTINGS

- A. All fittings shall be manufactured in accordance with ANSI Specification A 21.10 latest revision. Fittings shall be bell mechanical joint, ANSI Specification A21.10 latest revision and shall have cement mortar lining in accordance with ANSI Specification A21.4 latest revision. All fittings shall be coated outside with bituminous material.
- B. All fittings shall be compact fittings and have a pressure rating of 350 psi. Fittings four inches (4") through twelve inches (12") shall be cast iron with an iron strength of 25,000 psi.
- C. All couplings shall be cast mechanical joint sleeve type twelve and one-half-inch (12.5") minimum width.

2.05 VALVES

A. Gate Valves:

- 1. All gate valves shall conform in all respects to latest AWWA Specifications for resilient wedge type gate valves. Valve shall be Waterous, Mueller, or M & H double resilient wedge type valve or equal as approved by Engineer.
- 2. Gate valves shall be vertical open counter-clockwise, of the non-rising-stem type with mechanical joint ends and two-inch (2") square operating nut. Gate valves shall be iron body, double disc, parallel seat, fully bronze mounted.
- 3. Gate valves shall be designed for a working pressure of 200 psi.
- 4. Gate valves shall conform to AWWA C500 and / or C509.

B. Valve Boxes:

- 1. Valve boxes shall be of close-grained grey cast iron, in three (3) pieces consisting of a lower base piece which shall be flanged at the bottom to fit around the stuffing gland and rest on the valve bonnet and an upper part which shall also be flanged on the lower part and the upper and being constructed in the form of a socket to receive the cover. The center piece shall have a minimum five-inch (5") inside diameter and shall have a minimum thickness at any point of three-sixteenth of an inch (3/16").
- 2. The valve box shall be East Jordan Iron Works 4905 or equal quality approved by the Engineer.
- 3. The cover shall have cast on the upper surface in raised letters the word "WATER".
- 4. Valve boxes shall be painted prior to shipment with a coat of protective asphaltum paint and contain a cement collar.

2.06 FIRE HYDRANTS

- A. Fire hydrants shall be AWWA C502, compression type and designed for a minimum working pressure of 150 psi and hydrostatic test pressure of 300 psi with the valve in both the open and closed position.
- B. The hydrant shall be connected to the main by a 2" mechanical joint, screwed or flange shoe. Mechanical joint shoes shall be fitted with strapping lugs. All nozzles shall have N.P.T. threads. Nozzles shall be bronze with cast iron caps secured thereto with suitable steel chain. A drain outlet shall be provided.
- C. Hydrant shall be constructed of ASTM A-126. The main valve facing the hydrant shall be made of rubber.

The bottom stem treads of the main valve rods shall be fitted with a bronze scorn nut, or suitable means, for sealing the threads away from the water.

The upper hydrant operating stem within the bonnet shall be sealed and lubricated by means of an oil or grease bath. The operating nut shall be National Standard pentagonal type measuring one and one-half inches (1.5") from the point to flat. Hydrants shall open counter-clockwise.

- D. Hydrant shall have 2 - 1/2" hose nozzles.
- E. Hydrants shall be "safety" type so that if the upper barrel is broken off, the hydrant valve will remain closed and reasonably tight.
- F. All hydrants shall be furnished with barrel and stem extensions as required for the final field location. Nominal minimum burial will be thirty-six inches (36").
- G. Hydrant shall be M & H Style 233, or equal as approved by Engineer and Owner.
- H. Hydrants shall be marked with name of manufacturer, year of manufacturer, and size.
- I. The inside of all hydrants shall be coated in accordance with AWWA standards except for bronze and machined surfaces. Exterior on hydrant nozzle section shall be painted the color specified by the Owner.

2.07 SERVICE FITTINGS

- A. Service clamp shall be a brass saddle double bolt, as manufactured by Ford or Mueller, A. Y. McDonald 3801 single strap brass for I.P.S. PVC, threaded to match corporation cock (AWWA C800 threads) (Double bolt, double strap on C-900 pipe) or equal approved by Engineer. (Dresser preferred)
- B. Corporation cock shall be Hays Mfg. Co. #5606-DF A. Y. McDonald 470IT, 3/4" or equal approved by Engineer.
- C. Curb stops shall not be required.

- D. Service line three-quarter inch ($\frac{3}{4}$ ") and smaller shall be polyethylene Orangeburg SP water service, (AWWA C901-78), Yardley tubing, PE 3408, 200 PSI, CTS, SDR 9 (copper diameter) or equal approved by Engineer. Use stainless steel bands for all joints.
- E. Meter box shall be standard plastic meter box by Carson Industries, LLC Model No. 1419-18 with cast iron meter lid suitable for radio read meters, or equal approved by Engineer.
- F. Ford, A. Y. McDonald, or Mueller $\frac{3}{4}$ " x 7" copper meter setter with angle ball valve and dual check valve shall be supplied in meter box.
- G. Meters shall comply with AWWA C700-71 "AWWA Standard for Cold Water Meters Displacement "Type" and be supplied by the Owner. Owner will be responsible for meter installation. Meter shall be a radio read type that shall remain consistent with other meters already installed in the water system. Contractor to verify meter brand and size with Owner prior to ordering appurtenances.
- H. Connections of polyethylene pipe (PE) to corporation cocks at water mains shall be by brass transition, compression type fittings to adapt male pipe thread on corporation cock to PE pipe. Connection of PE pipe to meter yoke at terminal point of service line shall be by brass compression type fittings from PE pipe to female pipe thread on the meter yoke.
- I. The Contractor shall, where shown on the plans or instructed by Engineer, make the necessary tap in the main, insert a corporation stop, run the service line (boring under pavement where required), and set a meter yoke and meter box at such location as designated by Engineer.

2.08 MISCELLANEOUS

- A. **WET TAPS:** Where indicated on the drawing, the Contractor shall furnish a stainless steel tapping sleeve with valve suitable for wet tapping the existing PVC or A.C. water line as may be present in the field. The tapping sleeve shall be a stainless steel sleeve with a mechanical joint outlet as manufactured by Romac or equal as approved by Engineer. Tapping sleeves for use with A.C. pipe shall be Romac or equal as approved by Engineer. The tapping valve shall have a mechanical joint. Tapping valve shall be equal to F-6114 as manufactured by Clow Corporation. The valve shall be equipped with a non-rising stem and a 2-inch operating unit. The gate valve shall be equal in all respect to the gate valve specification described herein before.
- B. **THRUST BLOCKS:** Concrete shall be composed of Portland cement, sand and crushed stone (or gravel) mixed in proportions to develop the 28-day compressive strength of not less than 3000 pounds per square inch.
- C. **ROAD BORE AND JACK:** Smooth wall casing pipe shall be of welded steel construction and new material with a minimum yield point of 35,000 psi and shall conform to the North Carolina Department of Transportation standards Section 932.8. The inside diameter of the casing pipe shall be not less than two inches (2") greater than the largest outside diameter of the carrier pipe, joints or couplings. The pipe shall have a minimum wall thickness of one-quarter of an inch (0.250"). The casing pipe shall be

cleaned and coated both inside and outside with two coats of coal tar paint, Koppers "Bitumastic Super Service Black," Mobile "High-Build: Bituminous Coating 35-J-10" or equal approved by Engineer.

- D. CONCRETE VAULTS: Meter vaults, if required, shall be as shown on drawings.
- E. BLOW OFFS: Blow offs shall be as shown on drawings.

PART 3 - EXECUTION

3.01 EARTHWORK

A. Scope:

- 1. Furnish all labor, plant, materials, and equipment required to construct the waterline, appurtenances, and other miscellaneous items. Excavate the trench, furnish and install pipe, backfill the trench, maintain the backfilled trench until final acceptance, replace pavement, sidewalks, driveways, curb and gutter, and any permanent structures where required and clean up the right of way after construction.

B. Preparation:

1. Alignment and Grade:

- a. Deviations: Wherever obstructions, not shown on the plans, are encountered during the progress of the work and interfere to such an extent that an alteration in the plan is required, the Engineer and the Owner shall be notified at once for approval of any changes.
- b. Depth of Pipe: The pipe shall be buried to provide thirty-six inches (36") of cover over the top of the pipe, unless specified by the Engineer. High points in the line shall be avoided in intersections and when crossing streets. Required cover shall be located at service meters or air vents. Ditch crossings shall have a minimum twenty-four-inch (24") cover.
- c. Location: The pipe shall be located at a minimum of ten feet (10') from any waste water pipe. It shall be located as defined in North Carolina Department of Environment and Natural Resources, Department of Environmental Health, Public Water Supply Section "Rules Governing Public Water Supplies" or as recommended by the Engineer.

2. Trench Width And Bedding:

- a. The Contractor shall keep pipe laying operations as close to the excavation as possible during the prosecution of the work. The Engineer reserves the right to stop the excavation at any time when, in his opinion, the excavation is opening too far in advance of the pipe laying.

- b. Pipe trenches shall be excavated to a depth that will insure a minimum of thirty-six inches (36") of cover for waterlines as measured from the top of the pipe barrel to the average ground surface at the center line of the trench, unless otherwise shown on the drawings or directed. Trenches shall be only of sufficient width to provide a free working space on each side of the pipe. To prevent excess pressure on the pipe, the maximum width of trench at the top of the pipe shall not be greater than eighteen inches (18") more than the greatest exterior diameter of the pipe barrel. If this maximum width is exceeded, it shall be the Contractor's responsibility to provide cradle. All work shall be done in open trenches, unless otherwise specified. Excavation shall be made for bells of all pipes and shall be of sufficient depth to permit access to the joint for construction and inspection. In no case will bells be used to support the body of the pipe.
 - c. In case excavation has been made deeper than necessary, a layer of concrete, fine gravel, or other suitable material in sufficient quantity shall be placed at no extra cost to secure a firm foundation for the pipe.
 - d. Excavated material shall be placed to interfere as little as possible with public travel. Bridging shall be provided to afford necessary access to public or private premises. Bridging shall be considered as part of excavation and will not be paid for as an extra.
4. Unstable Subgrade:
- a. In the event that unsuitable bedding material is encountered at or below the level of the pipe bed, such material shall be removed and replaced, or removed, stabilized and replaced as directed in writing by the Engineer. Material used for replacement shall be loose earth, sand, gravel, crushed rock or other material specifically approved by the Engineer. The Contractor shall be paid for gravel or rock-like materials used to replace or stabilize the subgrade under the appropriate bid item only if such materials are authorized by the Engineer. Sand or suitable earth required shall be furnished as part of the ordinary excavation and backfill. The measurement of materials required for unstable subgrade shall include a width equal to the pipe outside diameter plus eighteen inches (18") and a length measured along the centerline of the pipe.
 - b. The Contractor shall not be paid for materials used in replacing excess, unauthorized excavation beyond the limits shown in the drawings. The Engineer shall determine the depth of excavation required for providing suitable bedding material.
 - c. The Contractor's particular attention is called to the fact that materials required for unstable subgrade will not be authorized by the Engineer to correct conditions which have resulted from the weather or other wet trench conditions resulting from the Contractor's choice of working area or weather conditions. The Contractor shall be paid for stabilizing subgrade only when it can be shown that unstable subgrade conditions

existed prior to excavation and when the Engineer determines that a payment authorization is justified by natural ground conditions.

- d. The Contractor shall prevent the accumulation of water in trench excavation and shall remove by well point system, and/or by other means satisfactory to the Engineer, any water or other liquid waste which accumulates in the excavation. The Contractor shall provide the proper equipment to remove water, other liquids and possibly gases from the excavation and its adjacent area. The Contractor shall prevent damage, of any sort, to public or private property or cause undue nuisance to the public. All water removed from the excavation site shall be piped to a storm drainage system nearest to the excavation.

5. Sheeting And Shoring:

- a. The Contractor shall furnish and place all necessary bracing, sheeting or shoring necessary to construct and protect the excavation, existing utilities, structures of all types and as necessary for the safety of the employees. All sheeting shall be removed by the Contractor during backfilling operations unless directed otherwise by the Engineer.

C. Services (1-1/2" and Smaller):

- 1. Trenching for services may be as specified for water mains or shall be performed with a trencher similar to Ditch Witch. Trenches for services shall be a minimum of four inches (4") in width and shall provide a minimum of thirty inches (30") of cover over service pipe at all points.
- 2. After opening the trench, the trench bottom shall be examined for stones or other material which may damage the pipe, and such materials shall be removed. If necessary, the trench shall be undercut by at least three inches throughout and backfilled to the required elevation with select backfill or bedding material thoroughly into place.

D. Backfill:

1. WATER MAINS:

- a. All trenches shall be backfilled immediately after the pipes are laid therein, unless other protection of the pipe line is provided. The backfill material shall be selected and deposited with sufficient reference to the future safety of the pipe. Backfill material shall be select backfill unless otherwise specified by the Engineer. Select backfill shall consist of sand or gravel containing less than 20% by weight of fines (soil groups SW, SP, SP-SM, SM), having a liquid limit less than 20 and plastic limit less than 6, and free of rubble, organics, clay, debris and other unsuitable material.
- b. Prior to backfilling, a number 12 gauge solid copper wire conductor shall be located on top of all lines and service lines terminating at each valve

box or meter box.

- c. During backfilling/top-soiling of underground potable water piping, install continuous underground-type plastic line marker, located directly over buried lines at six to eight inches (18") below finished grade.
- d. Backfill material shall be solidly tamped around the pipes in 4" - 6" layers up to a level at least one foot (1') above the top of the pipe. Backfilling shall be carried out simultaneously on both sides of the pipe. Backfill shall be deposited and compacted to 95% of the modified Proctor maximum dry density ASTM D1557.
- e. Where paving is to be placed over the backfilled trench, the entire depth of backfill shall be deposited in six-inch (6") layers compacted to 95% of the modified Proctor maximum dry density ASTM D1557.

3.02 INSTALLATION AND RESTORATION

A. General:

1. Laying Pipe

- a. All pipe, valves and fittings shall be thoroughly cleaned immediately prior to placing in the line. The line shall be plugged water-tight when left unattended. All pipe shall be laid in accordance with the specifications of the pipe manufacturer. All joints shall be made according to specifications and as recommended by the pipe manufacturer. Pipe ends must be clean and free of all sand and dirt before making joint.
- b. Joint deflection shall be within manufacturer's recommendation.
- c. All exposed utilities shall be supported so as to maintain structural integrity and maintain service unless stoppage of service is authorized by Engineer.

B. Jointing:

- 1. Mechanical joints shall be lubricated with vegetable soap and bolts tightened evenly to between 75 and 90 foot-pounds.
- 2. Push-on joints shall be lubricated in accordance with the manufacturer's recommendations.

C. Setting Valves, Fittings and Hydrants:

- 1. General: Valves, fittings, FIRE hydrants, plugs and caps shall be set and joined to the pipe in a manner as specified for cleaning, laying and joining pipe.
- 2. Valves:

- a. Shall be placed as shown on the drawings or as directed by the Engineer. Valves shall be located at all tees and crosses and not farther apart than 1,000 feet. Valves shall be installed on all branches from feeder mains and hydrants according to the following schedule:
 (1) three valves at x (crosses),
 (2) two valves at T's (tees), and
 (3) one valve on single hydrant branch.
- b. The valve shall be set plumb.
- c. A valve box shall be provided for each valve. The box shall not transmit shock or stress to the valve when the box cover is flush with the surface of the pavement or such level as may be directed. The base section of the valve box shall be set two inches (2") above the flanged bonnet joint of the valve and accurately centered on the valve operating unit.
- d. A witness shall be provided to the Owner if required.
- e. A precast concrete ring shall be provided around the top of each valve box, flush with the surface. The ring shall be a minimum twelve inches (12") in diameter.
- f. A four-foot (4') concrete or pressure-treated wood post shall be provided at each valve for a location marker if required by the Owner Water Department. The post shall be a minimum of four inches (4") wide.

3. Fire Hydrants:

- a. Shall be installed where shown on drawings or as directed by the Engineer. The hydrant shall be set on a compacted crushed stone base thirty inches (30") square and ten inches (10") thick. Reaction backing shall be installed behind the base of the hydrant and as shown on Details.
- b. The hydrant shall be plumb with the pumper nozzle facing the street and nozzle centerline twelve-inch (12") minimum above finished grade.
- c. Each hydrant must be connected to the mainline with a six-inch (6") cast iron branch and controlled by a gate valve with size specified on the drawings. Drainage shall be provided at the base of the hydrant by placing coarse gravel from the bottom of the trench to at least six inches (6") above the weep hole.
- d. A witness shall be provided to the Owner if required.

4. Fittings:

- a. Plugs, tees and bends deflecting eleven and one-quarter (11-1/4) degrees or more shall be provided with reaction backing. A witness shall be provided to the Owner if required.

5. Reaction Backing

- a. Reaction backing shall be concrete having a compressive strength of not less than 3,000 psi at 28 days. Backing shall be placed between solid ground and the fitting to be anchored; the area of bearing on the pipe and on the ground shall be as shown on the Detail Sheet. The backing shall be so placed that the pipe and fitting joints will be accessible for repair.
- b. Unsuitable soil conditions for trench walls shall require securing fittings with tie rod clamps and concrete or doubling square footage requirements.

6. Encasement:

- a. Polyethylene encasement on the cast iron pipe will be required in corrosive soil. If corrosive soils are suspected, the developer shall provide the Engineer with a corrosive soils report.

D. Connections

1. Existing Waterlines

- a. Connections shall be made with system pressure on or off as specified by the Owner and Engineer. Existing waterline shall be adequately supported during the tie-in operations and prior to placement of backfill. Reaction backing shall be placed behind all tie-in fittings.
- b. Prior to cutting existing pipe lines, the surface of the existing pipe shall be thoroughly cleaned by wire brushing and scraping. When a cut-in is made under pressure, the existing pipe surface shall be washed down with a 4% solution of chlorine prior to installing the tapping valve and sleeve. All fittings, pipe, valves, etc., used in the connection that cannot be disinfected during normal waterline chlorination shall be swabbed out with a 4% or stronger solution of chlorine (Roman Cleanser, Clorox, etc.) during assembly. Care shall be exercised in order to prevent contamination of the existing waterlines, and failure to comply with this requirement will necessitate chlorination of existing waterlines at the Contractor's expense.
- c. After connection is made, drain sufficient water from the connection to effect removal of the chlorine solution.
- d. The dimensions of existing waterlines may not allow use of standard mechanical joint fittings, since these water mains may be pit case pipe, asbestos-cement pipe and/or classes other than standard.

Pressure on: Install valve and sleeve.

Pressure off: Install solid or cutting-in sleeve.

- e. A witness shall be provided to the Owner if required.

2. Service Lines

- a. General: Provide a minimum 3/4" service to all lots. Larger services may be required for commercial or multiple housing.
- b. Line and Grade: Service lines shall be located as shown on plans and shall be at right angles to six-inch (6") water main. Minimum depth to top of pipe shall be thirty inches (30").
- c. Tapping Waterline: Corporation cock shall be installed 45 degrees above center and provide horizontal loop with service line at tap.

Maximum Tap Sizes

<u>Type of Pipe</u>	<u>4"</u>	<u>6"</u>	<u>8"</u>	<u>10"</u>	<u>12" - 24"</u>
Cast Iron C 122	1 1/2"	3/4"	1"	1 1/4"	2"
All Pipe (with dbl strap saddle)	1"	1 1/2"	2"	2"	2"

- d. Meter and box shall be provided for each service connection located on plans.
- e. A witness shall be provided to the Owner if required.

E. Backfilling

1. It shall be the Contractor's responsibility to keep all backfill even with the surrounding road surface until the work has been accepted the Engineer. Extreme care shall be exercised in placing warning signs, lights and substantial barricades on the work.

F. Boring and Jacking Under Roadway:

1. General: The Contractor shall furnish all labor, materials, tools, equipment, and perform all work and services necessary for or incidental to the furnishing and installation complete of all boring and jacking under roadway as shown on drawing and as specified in accordance with provisions of the contract documents and completely coordinated with that of all other trades. Although such work is not specifically shown or specified, all supplementary or miscellaneous items, appurtenances, and devices incidental to or necessary for a sound, secure and complete installation shall be furnished and installed as part of this work.
2. Quality Standards: Procedures for boring and jacking shall be in accordance with the best accepted practice of the industry and these specifications.
3. Submittals: The Contractor shall submit to the Engineer the manufacturer's name

for all materials to be used in this project, along with such other information the Engineer may request.

4. Product Delivery, Storage And Handling: Units shall be delivered, stored and handled in such a manner to avoid damage to the material.

G. Job Conditions: Verify all grade and alignment prior to setting up boring rig. Installation assumes responsibility for performance.

H. General Requirements

1. In placing the pipe, any annular space exceeding one-quarter inch (1/4") in width between casing and tunnel shall be filled with 1:2 portland cement mortar grout, pumped into the space to form a tight fit between casing and tunnel walls. Cost of grouting shall be an integral part of the price submitted in the Proposal for the type and size pipe, "Bored Under Pavings", required by the installation.
2. The Engineer may require "Boring and Jacking" under objects or pavings not indicated on the plans but required in the best interest of the Owners, in which case the payment for each linear foot required will be made at the unit price given in the Proposal for "Boring Under Paving."

I. Installation:

1. All work on boring and/or casing under roadway shall be under the supervision of the District's Engineer of the Department of Transportation or his authorized representative who shall be notified at least five (5) days before actual work or installation begins.
2. Pipelines shall be installed under roadway by boring and jacking, if practicable.

J. Carrier Pipe: Carrier line pipe and joints under roadway shall be of approved material and construction satisfactory to the District's Engineer of the Department of Transportation. Pipelines operating under pressure must be of a material and type capable of withstanding the internal stresses generated in the lines. Joints may be welded, screwed, mechanical or push-on type.

K. Depth of Casing Pipe: The depth from surface of roadway to top of pipe at its closest point shall not be less than three feet (3').

L. Protection of Ends of Casing Pipe: Where ends of casing are below ground, they shall be suitably protected against the entrance of foreign material but shall not be tightly sealed. Where the ends of the casing are at or above ground surface and above high water level, they may be left open, provided drainage is afforded in such a manner that leakage will be conducted away from roadway surface or structures.

M. Shoring of Ditches:

1. Shoring shall be done in a neat, safe and workmanlike manner so as to prevent any cave-ins or settlement of the roadway and so as not to endanger any

personnel working in the ditch.

2. Contractor shall be required to provide shoring of pits, trenches and other excavation in accordance with the latest requirements of the North Carolina Department of Transportation and the Federal Occupational Health and Safety Act.

- N. Length of Casing Pipe: Casing pipe shall be of a length as determined to be necessary by the Department of Transportation District Engineer and the Project Engineer.
- O. Removal of Casing Pipe: In the event that an obstruction is encountered during the dry boring operation, the auger and spiral-welded, steel-pipe encasement are to be withdrawn, and the void is to be completely filled with grout at 25 psi pressure before moving to another boring site.
- P. Blow Offs: Hydro Guard Standard Unit HG-1 blow offs shall be installed per manufacturer's recommendations and as shown on detail sheet.

3.03 SEPARATION OF WATERLINES AND SANITARY (OR COMBINED SEWERS) AND STORM SEWER SHD 80

- A. Lateral Separation of Sewers and Water Mains: Water mains shall be laid at least 10 feet laterally from existing or proposed sewers, unless local conditions or barriers prevent a 10 foot separation in which case:
 - a. The water main is laid in a separate trench, with the elevation of the bottom of the water main at least 18 inches above the top of the sewer; or
 - b. The water main is laid in the same trench as the sewer with the water main location at one side on a bench of undisturbed earth, and with the elevation of the bottom of the water main at least 18 inches above the top of the sewer.
- B. Crossing a Water Main Over a Sewer: Whenever it is necessary for a water main to cross over a sewer, the water main shall be laid at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer, unless local conditions or barriers prevent and 18 inch vertical separation in which case both the water main and sewer shall be constructed of ferrous materials and with joints that are equivalent to water main standards for a distance of 10 feet on each side of point of crossing.
- C. Crossing a Water Main Under a Sewer: Whenever it is necessary for a water main to cross under a sewer, both the water main and sewer shall be constructed of ferrous materials and with joints equivalent to water main standards for a distance of 10 feet on each side of point of crossing. A section of water main pipe shall be centered at the point of crossing.

3.04 RESTORATION AND MAINTENANCE

- A. Maintenance of Streets and Private Drives:

1. Where the waterline is to be laid in streets or on the shoulder of paved streets, the Contractor shall be responsible for maintaining the streets and adjacent private drives and entrances in usable conditions at all times. After pipe laying operations are completed in each area or designated section, the Contractor or Owner shall clean up all debris and surplus earth and restore the street or area immediately adjacent to the street to the same condition as existed before construction.

B. Replacing Pavement:

1. All pavement in county streets and on state highways shall be replaced in kind or as required by North Carolina Department of Transportation. In street areas the trench backfill shall be maintained for traffic until, in the opinion of the Owner, complete settlement and compaction has been obtained. The cut area shall then be excavated to proper depth, base course placed and compacted and the pavement surface replaced. Base course and pavement shall conform to the requirements of the North Carolina Department of Transportation.

C. Cleaning up:

1. During the progress of the work, the premises and vicinity of the work shall be kept free from unsightly and disorderly piles of debris and materials resulting from or used in the construction operations. Suitable locations shall be allotted for the various materials and debris. The materials shall be kept in their storage locations except as needed in the work, and debris shall be promptly and regularly collected and deposited in the allotted location, the intent being to avoid unnecessary unsightly and disorderly appearance and confusion, and to promote an orderly and efficient conduct of the work.
2. Upon completion of each structure or element of the work, the adjacent ground shall be shaped up, all surplus excavated material removed and the area left free from humps and hollows.

3.05 FIELD QUALITY CONTROL

A. Testing and Inspection:

1. General: The Engineer and Owner will be witnessing the testing and inspecting the lines as construction progresses. All testing shall be completed before connecting to existing water lines. The Contractor shall notify the Owner and

Engineer twenty-four (24) hours in advance of when he will be ready for inspection and testing and shall pretest before notifying the Owner.

Hydrostatic testing for PVC pipe shall be in accordance with AWWA C605.
Hydrostatic testing for DIP pipe shall be in accordance with AWWA C600.

- B. Pressure Test: After the pipe has been laid and backfilled as specified, all newly laid pipe, or any valve section thereof, shall be subjected to a hydrostatic pressure of 200 psi.

Air on air-water methods of applying pressure are prohibited.

Test pressure shall:

- Not exceed pipe or thrust restraint design pressures.
- Be of at least 2-hour duration.
- Not vary by more than +/- 5 psi.
- Not exceed twice the rated pressure of the valves or hydrants when the pressure boundary of the test section includes closed gate valves or hydrants.
- Not exceed the rated pressure of the valves if resilient-seated butterfly valves are used.

1. Pressurization: Each valved section of pipe shall be slowly filled with water, and the specified test pressure shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Owner or Engineer.
2. Air Removal: Before applying the specified test pressure, air shall be expelled completely from the pipe, valves and hydrants. If permanent air vents are not located at all high points, the Contractor shall install corporation cocks at such points so that the air can be expelled as the line is filled with water. After all the air has been expelled, the corporation cocks shall be closed and the test pressure applied.
3. Examination: All exposed pipe, fittings, valves, hydrants and joints shall be examined carefully during the test. Any damage or defective pipe, fittings, valves or hydrants that are discovered following the pressure test shall be repaired or replaced with sound material and the test shall be repeated until it is satisfactory to the Owner or Engineer.

C. Leakage Test:

1. A leakage test shall be conducted concurrently with the pressure test. Leakage shall be defined as the quantity of water that must be supplied into the newly lain pipe, or any valved section thereof, to maintain pressure within five (5) psi of the specified test pressure after the air in the pipeline has been expelled and the pipe has been filled with water.
2. Allowable Leakage:

<u>Pipe Diameter</u> (inches)	<u>Leakage/1000 Feet</u> (GPH)
2	.17
4	.33

6	.50
8	.66
10	.83
12	.99

3. When hydrants are in the test section, the test shall be made against the closed hydrant.
4. Acceptance of installation: Acceptance shall be determined on the basis of allowable leakage. If any test of pipe laid discloses leakage greater than listed above, the Contractor shall, at his own expense, locate and repair the defective material until the leakage is within the specified allowance.
5. All visible leaks are to be repaired regardless of the amount of leakage.

D. Testing Valves Only:

1. Maintain pressure on the line and close each valve starting progressively from the far end of the system. Vent extreme ends of the line.
2. Allowable pressure drops shall be less than ten (10) psi in five (5) minutes with test pump off.

3.06

ADJUST AND CLEAN

- A. Flushing: The water shall be flushed by providing taps in sufficient size or number to provide a velocity of two and one-half feet (2.5') per second in the line flushed. Hydrants may be used providing that all dirt and debris which may have collected in the line are removed. Lines shall be flushed at a maximum of one-quarter (1/4) mile intervals. Flushing may be done prior to pressure testing or following pressure testing, but in any case, prior to chlorination of the waterline.
- B. Chlorination: All newly laid lines shall be chlorinated. All necessary equipment, materials and assistance for effective disinfection of the water lines shall be furnished by the Contractor. (Raw water mains are exempt from this requirement)
 1. Procedure: The waterlines are to be disinfected in accordance with AWWA Specifications C651. After the waterline has been pressure tested and flushed, a chlorine solution shall be pumped into the waterline in such a manner and at such strength that the residual free chlorine shall be fifty (50) ppm.
 - a. High Test Calcium Hypochlorite: ("HTH", "Perchloren", "Pittchlor"). A 10,000 parts per million solution in water shall be prepared and pumped at a constant rate into the waterline while bleeding off the water at the extreme end. The bleed rate will determine the feed rate of the chlorine in order to arrive at fifty (50) ppm solution in the waterline.
 - b. Liquid Chlorine: Liquid Chlorine may be applied to the waterline much the same way as the hypochlorite solution listed above. The liquid must be mixed with water before pumping into the waterline. The rate of

application will have to be adjusted for the degree of concentration of the liquid chlorine.

- c. Chlorine Gas: Chlorine gas shall not be used to chlorinate the waterline.
- 2.. Point of Application: The chlorinating agent shall be applied at the supply end of the line through a corporation cock. The water for injecting the chlorine into the new line may be taken from the pressure side of the isolation valve or by utilizing a pressure pump. Care shall be exercised to prevent any of the strong chlorine solution from entering the existing waterline.
3. Retention Period
 - a. The chlorinated water shall be retained in the new waterline for a period of twenty-four (24) hours. The chlorine residual after twenty-four (24) hours retention time should be at least ten (10) ppm.
 - b. While the chlorine solution is in the line, valves in the chlorinated section shall be operated to insure the complete disinfection thereof.
4. Flushing and Testing: After the applicable retention period (24 Hours), the heavily chlorinated water shall be flushed from the main until chlorine measurements show that the concentration in the water leaving the main is no higher than that generally prevailing in the system or is acceptable for domestic use. (Chlorine residual testing shall be in accordance with AWWA M12 - "Simplified Procedures for Water Examination" or by using the DPD Drop Dilution Method of approximating total residual chlorine). After final flushing, the Contractor shall wait 24 hours before taking sample collections for bacteriological analysis. The Contractor shall furnish sterilized bottles and take a minimum of three (3) water samples from various points along the line. The Contractor shall send the samples to an approved laboratory for bacteriological analysis. In the event the water does not pass the bacteriological test, the test procedure outlined above shall be repeated until the quality of water is substantially the same as that being delivered from the existing distribution system, upon which time the lines may be placed into service upon notification of the Engineer and the Owner.
- C. Pressure Test and Chlorinating Report Forms: All information relative to pressure testing and chlorinating procedures and results shall be reported on standard forms available at the office of the Owner Water Department.

These reports will be submitted to the Engineer and Owner immediately upon completion of said tests and disinfection.

3.07 VERIFICATION

- A. Upon completion of the construction of the water distribution system, the Owner shall submit a statement signed by a registered professional Engineer and affixed with his professional engineering seal stating that construction was completed in accordance with approved plans and specifications and revised only in accordance with the provisions of .0906 of the North Carolina Administrative Code. This statement shall be based upon adequate observations during and upon completion of construction by the Engineer or a representative of the Engineer's office who is under his supervision.

3.08 LINES BECOMING PROPERTY OF OWNER

After construction is completed and work has been inspected and approved by the Owner and any State and local officials, the Owner intends to assume responsible ownership of said water main after the expiration of the two year warranty period, and submission of as built drawings as stated in the Owner's water main specifications ordinance.

END OF SECTION 02555

SECTION 02733 - WASTEWATER FORCE MAIN

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract apply to this Section.

1.2 SUMMARY

- A. This Section includes wastewater effluent force main piping and appurtenances.
- B. Related Sections: The following Sections contain requirements that relate to this Section.
 - 1. Section 02200ww - Earthwork
 - 2. Section 03300 - Concrete (Thrust Blocks)

1.3 QUALITY ASSURANCE

- A. Comply with applicable portions of any Local Health Department site improvement permit and NCDENR permits.

1.4 PROJECT CONDITIONS

- A. Site Information: Perform site survey and verify existing utility locations. Contractor to physically locate existing forcemain and protect during construction.

PART 2 - PRODUCTS

2.1 WASTEWATER FORCE MAINS

- A. PVC SCH 40 (Polyvinyl Chloride) plastic pipe
 - Pipe: ASTM D1785 Schedule 40
 - Fittings: ASTM D2466 Schedule 40
 - Joints: ASTM D2564 Solvent cements for PVC pipe
- B. PVC SDR 21 (Polyvinyl Chloride) plastic pipe (white color)
 - Pipe: ASTM D2241 SDR 21
 - Fittings: ASTM D2466 Schedule 40 (glue fittings)
 - Joints: ASTM D3034 & D3212 Joints for drain and sewer plastic pipes using flexible elastomeric seals

2.2 FORCE MAIN APPURTENANCES

- A. PVC plastic ball valves, true union ball valves, unions, true union check valves, and check valves shall be PVC, designed for a working pressure of 150 psi, and conform to size shown on Drawings.
 - 1. Ball Valve: As manufactured by Spears.
 - 2. True Union Ball Valve: As manufactured by Spears.

- 3. Union: As manufactured by Spears.
- 4. True Union Check Valve: As manufactured by Spears.
- 5. Check Valve: As manufactured by Spears.
- B. Meter box shall be plastic box with cast iron reader lid for non traffic applications and conform to size shown on Drawings.
 - 1. Meter Box: As manufactured by Carson Industries

PART 3 - EXECUTION

3.1 DEPTH OF PIPE:

- A. 36-inch minimum cover, ground surface to top of pipe unless otherwise noted.

3.2 FORCEMAIN CROSSINGS:

- A. All Pipe installation shall comply with setbacks outlined in 15A NCAC 02t .0305 (f).
- B. Storm crossings: Forcemain shall cross below Storm Sewer pipe with a minimum of twenty-four (24) inches clear separation between the top of the forcemain pipe and the bottom of the storm sewer, unless otherwise directed by the Engineer.
- C. Waterline crossings: Forcemain shall cross below waterline pipe with a minimum of eighteen (18) inches clear separation between the top of the forcemain pipe and the bottom of the waterline, unless otherwise directed by the Engineer.

3.3 STRINGING, CLEANING:

- A. Pipe and fittings shall be strung out along the route of construction with the bells facing in the direction in which the Work is to proceed. Pipe shall be placed where it will cause the least interference with traffic. Pipe shall be handled by mechanical equipment. Before the pipe is lowered into the trench, it will be swabbed or brushed out, if required, to insure that no dirt or foreign material remains in the finished line. Trench water shall be kept out of pipes and the pipe kept closed by means of a test plug whenever Work is not in progress. The Contractor shall provide the means for dewatering the trench and the cost thereof shall be included in the price for installing the pipe.

3.4 PREPARATION OF TRENCH & BEDDING:

- A. Pipe shall be laid in a level trench. Irregularities shall be smoothed out or filled in with sand and tamped as required. Holes shall be scooped out where the joints occur leaving the entire barrel of the pipe bearing on the pipe bed.

3.5 DEFLECTIONS:

- A. Deflections from a straight line or grade made necessary by vertical curves or horizontal curves or offsets shall not exceed the manufacturer's recommendations. If the specified or required alignment requires deflections in excess of those recommended, the Contractor shall either provide special bends as approved by the Owner or his Engineer or a sufficient number of shorter lengths of pipe to provide angular deflections within the required limit.

3.6 JOINTING:

- A. Jointing shall be carried out following the recommendations of the manufacturer of the pipe. All joints shall be watertight and any leaks or defects discovered shall be immediately repaired to the satisfaction of the Engineer. Any pipe which has been disturbed after being laid shall be taken up, the joints cleaned and the pipe properly relaid. Any superfluous material inside the pipe shall be flushed or removed by means of an approved follower or scraper after joints are made. Installation of fittings and pipe joints shall be in strict accordance with the manufacturer's recommendations.

3.7 THRUST BLOCKS:

- A. Thrust blocks shall be installed at all fittings within the system which change direction of flow or create unbalanced forces about the fitting. When directed, thrust blocks shall also be installed on each side of pipe where bends are made by deflecting pipe or joints and soil conditions do not provide adequate support for the pipe.
- B. Thrust blocks shall be constructed of concrete which develops a 28-day strength of 2,500 psi and shall have a bearing area or volume as indicated on the Drawings. Concrete shall be kept behind the bells of fittings so as not to interfere with the joint or bolts and shall not run against gasket or pipe.
- C. Thrust blocks shall be constructed so as to bear against undisturbed soil unless special provisions are made which are approved prior to construction. If the soil encountered has insufficient bearing capacity to resist thrusts special provisions shall be made as required by the Engineer. Special provisions may include removal of poor soil and replacement with suitable material; installation of tie rods and collars; or installation of pile and thrust block.

3.8 BEDDING, INITIAL & INTERMEDIATE BACKFILL:

- A. Regardless of the bedding type specified, the pipe barrel shall be supported uniformly throughout its length. Bell or coupling holes shall be provided such that no pipe loads are supported by bells or couplings.
- B. Unless shown otherwise on the Drawings, bedding and initial backfill shall be type one when subgrade is stable (as examined by the Engineer) and trench width at the top of the pipe does not exceed that specified.
- C. Material for initial and intermediate backfill (as defined on the Drawings and below) shall be selected borrow material, granular material as defined under Section 02200 - Earthwork or selected trench material free of organics, refuse, stones larger than one inch and frozen material.
- D. Initial backfill is that which is placed from the pipe bedding material up to the centerline of the pipe. Initial backfill shall be hand-placed and carefully tamped under pipe haunches.
- E. Intermediate backfill is that which is placed from the initial backfill to one foot above the top of the pipe. Intermediate backfill shall be placed and tamped. Material shall be placed and tamped in layers not exceeding six inches thick when compaction required exceeds 80% of maximum dry density.
- F. Minimum Compaction:

Class 2 - unimproved areas
 Class 1 - roadways, road shoulders, driveways, walkways and slopes greater than 20%

<u>Pipe</u>	<u>Backfill Zone</u>	<u>% of Maximum Dry Density</u>	
		<u>Class 2</u>	<u>Class 1</u>
All Pipe	Initial Intermediate	80%	90%

3.9 FIELD QUALITY CONTROL, TESTING & INSPECTION

A. General

1. The Contractor shall be required to perform leakage tests on newly constructed mains as outlined herein. The Contractor will furnish the gauge for making the tests and Engineer shall approve the measuring device. The Contractor shall furnish the pump, pipe, connections, water, and all other necessary apparatus. Contractor shall furnish the necessary assistance to conduct the tests.
2. Leakage tests shall be performed on all sections of line. Testing shall be conducted as the Work progresses unless otherwise directed.
3. Prior to testing any segment of force main, care shall be taken to prevent the pipe from moving while under pressure.
4. Temporary taps and air releases shall be permissible to facilitate testing.
5. Water used for testing force main installations shall either be disposed in a nearby sanitary sewer, as authorized by the local sewer authority, or in another location in accordance with state and federal laws and regulations.
6. All testing shall be performed in the presence of the applicant, the PE, or other authorized representative.
7. The results of all testing shall be maintained by the applicant as part of the construction record documentation and provided to Owner and Owner's Engineer.

B. Pressure Testing

1. A hydrostatic pressure test shall be performed on each segment of installed force main.
2. The test shall be performed after the force main has been backfilled and at least seven days following the pouring of the last thrust block.
3. The following procedures shall be followed in performing hydrostatic pressure tests on force mains:
 - a. The force main segment shall be carefully filled with water at a velocity of approximately one foot per second. Water may be introduced from either the pump stations or a temporary connection made in the force main. Appropriate measures necessary to eliminate all air from the force main shall be taken during this process.
 - b. Once full of water, the force main segment shall be pressurized and allowed

to stabilize at a minimum test pressure of 1.5 times the maximum design pressure of the force main pipe material.

- c. This pressure shall be maintained for at least two consecutive hours.
- d. If the stated pressure cannot be maintained, the applicant is responsible for assuring that the cause of test failure is determined, all necessary repairs are made, and repeating the hydrostatic pressure test until the force main segment passes.

The pressure test may be performed concurrently or separately with the leakage test as required in paragraph C of this section.

C. Leakage Testing

- 1. A leakage test shall be performed on each segment of installed force main at the hydrostatic pressure test stipulated in paragraph B of this section.
- 2. Leakage shall be defined as the quantity of water required to maintain a pressure within five pounds per square inch of the specified test pressure after the pipe has been filled with water and all air has been expelled.
- 3. Leakage shall be measured with a calibrated test meter and shall not exceed the amount given by the following formula:

All visible leaks shall be repaired regardless of the amount of leakage. If leakage exceeds this rate, the applicant is responsible for assuring that the cause of test failure is determined, all necessary repairs are made, and repeating the test until the force main segment passes.

$$L = S D P^{0.5} / 133,200$$

L = allowable leaking in gallons per hour (gph)

S = length of pipe (feet)

D = nominal diameter of pipe (inches)

P = test pressure) pounds per square inch)

Permitted Leakage (1 gallon = 128 fluid ounces):

<u>Pipe Diameter</u>	<u>Permissible Leakage 10/ Joints</u>
1.25"	0.023 gallons
1.5"	0.027 gallons
2"	0.033 gallons
3"	0.042 gallons
4"	0.054 gallons
5"	0.066 gallons
6"	0.079 gallons

- 4. The leakage test may be performed concurrently or separately with the leakage test stipulated in paragraph B of this section.

3.10 FORCE MAIN APPURTENANCES

- A. All PVC plastic ball valves, true union ball valves, unions, true union check valves, and check

valves shall be installed in accordance with manufactures recommendations.

B. Meter Box shall be installed in accordance with manufactures recommendations.

END OF SECTION 02733

SECTION 02740 - PRECAST TANKS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract apply to this Section.

1.2 SUMMARY

- A. This Section includes precast septic and pump tank installation.
- B. Related Sections: The following Sections contain requirements that donate to this Section:
 - 1. Section 02200ww - Earthwork

1.3 SUBMITTALS

- A. General: Submit tank details from manufacturer.
- B. Shop drawings showing fabrication of each tank.

1.4 QUALITY ASSURANCE

- A. Comply with applicable portions of Local Health Department site improvement permit.
- B. Precast tanks (septic & Pump) shall be constructed in accordance with plans that have been approved by the North Carolina Department of Environment and Natural Resources, Division of Environmental Health and with all requirements of the Law and Rules for Sewage Treatment and Disposal Systems, Section .1900 which is hereby adopted by reference, with the exception that 1,000 gallon tank top slab is one piece and tank is one piece. No midseam on tank is permitted.
- C. All tanks produced shall bear an imprint identifying the manufacturer, the serial number assigned to the manufacturer's plans and specifications approved by the State, and the liquid or working capacity of the tanks. This imprint for septic tanks shall be located to the right of the blockout made from the outlet pipe on the outlet end of the tank. The imprint for pump tanks shall be located to the left of the outlet blockout. All tanks shall also be permanently marked with the date of manufacturer adjacent to the tank imprint or on the top of the tank directly above the imprint.

PART 2 - PRODUCTS

2.1 PRECAST TANK UNITS

- A. General:
 - 1. Provide tanks and accessories according to State approved plans, details and permit conditions.

2. Provide access openings and manhole castings as indicated.
- B. Precast Septic Tank: 1,000 gallon pre-cast septic tank, as manufactured by Stay-Right Precast, Inc., or equal as approved by Engineer.

2.2 MANHOLE COVERS

- A. Manhole covers shall be East Jordan Iron Works, Inc., V-1384 water tight lid with "Sanitary Sewer" imprinted on top or equal as approved by Engineer.
- B. Manhole inserts shall be Parsons Environmental Products, Inc. or equal as approved by Engineer.
- C. Manhole covers shall be made lockable with Contractor add on of stainless steel eye bolts screwed into ring and a non corrosive metal flange with holes suitable for attaching locks. (Locks to be provided by Owner.)

2.3 TANK SUBBASE MATERIAL

- A. Subbase Material: Compacted native soils.

PART 3 - EXECUTION

3.1 TANK INSTALLATION

- A. Excavation
 1. Dig suitable excavation, braced and sheeted as soil conditions dictate, refer to Section 02200ww - Earthwork.
 2. The excavation shall be kept free of water at all times. The contractor shall provide the means for dewatering the pit and the cost thereof shall be included in the price for installing tanks.
- B. Subbase:
 1. Compact native soils.
- C. Waterproofing:
 1. After joining, tanks manufactured in two sections shall be plastered along the joint with hydraulic cement, cement mortar, or other approved waterproofing sealant. Other methods of waterproofing tanks may be used as specifically approved in the Plans and Specifications for the system.
 2. Prior to backfilling, the local health department and Engineer shall make a finding that a two section tank is watertight.
- D. Leakage Test:

1. Prior to backfilling and covering tanks; perform leak test as follows:
 - a. Notify local health department and Engineer 24 hours prior to beginning test.
 - b. Tanks to be filled with clear water to top of tank (inlet and outlet pipes shall be plugged). The water shall be left in the tank for 24 hours and water level measured by Engineer.
 - c. With soil dewatered, water level in tank must not drop more than one-half ($\frac{1}{2}$ ") inch.

E. Backfill and Compaction:

1. Backfill in accordance with Section 02200ww - Earthwork
2. Protect tank from equipment and vehicular traffic.
3. Grade site to prevent ponding of water above and around tanks.

END OF SECTION 02740

SECTION 02741 - PUMPS AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract apply to this Section.

1.2 SUMMARY

- A. This Section includes sewage effluent pumps, controls, wiring, control panel with related work and accessories.
- B. The electric power supply to the wastewater control panel will be installed by the General Contractor. The wastewater contract electric system shall commence at the above supply stub-out and include connection to same up to and including final connection to equipment provided in this section.

1.3 SUBMITTALS

- A. Product Data: Submit complete descriptive data for all items. Data shall consist of specifications, data sheets, capacity ratings, performance curves, catalog cuts, dimensional drawings, wiring diagrams, installation instructions, and any other information necessary to indicate complete compliance with contract documents.

1.4 QUALITY ASSURANCE

- A. Comply with applicable portions of any Local Health Department Site Improvement Permit and NCDENR Permit.
- B. All electric work and materials under this section shall be in strict compliance with more stringent requirements of the North Carolina State Building Code, including the National Electric Code, NFPA 101 - Life Safety Code, Regulations of the State Fire Marshal, UL Directory of Electrical Construction Materials, and requirements of the local utility company.
- C. It is the intention of the Specifications and Drawings to call for finished work, tested and ready for operation.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment installed as a permanent part of the project shall be new, unless otherwise indicated or specified, and of the indicated type and quality. Where no specific type and quality of material is given, a first-class standard article as approved by the Engineer shall be furnished.
- B. The listing of a particular manufacturer or model number is not intended to indicate a sole

source but rather a minimum standard of quality or performance acceptable. Where material or equipment is identified by proprietary name, model number and/or manufacturer, furnish named item, or its equal, subject to approval by Engineer. Substituted items shall be equal or better in quality and performance and must be suitable for available space, required arrangement, and application. Submit all data necessary to determine suitability of substituted items, for approval.

- C. Where more than one item is named, only the first named item has been verified as suitable. Substituted items, including items other than first named shall be equal or better in quality and performance to that of the specified items, and must be suitable for available space, required arrangement and application.
- D. The contractor shall be required to adapt all substituted materials and equipment without increase to the contract amount. Where substitutions involve more than minor deviations from the plans and specifications, such deviations shall be submitted to the Engineer for approval prior to installation.

2.2 PUMPS

- A. Pumps: Barnes Model STEP-SS
1.0 Hp, 3450 rpm
Single phase, 230 Volt
2" Discharge, NPT
5.25" impeller
(Verify power supply with utility company prior to ordering pumps and controls)

2.3 CONTROL EQUIPMENT

- A. All control equipment manufacturing and wiring shall be done in accordance with the NEC, latest revisions. Control equipment shall generally consist of the following for each system:
 - 1. A main simplex control panel housing motor overcurrent protection and starters, control circuit transformer and control circuit switches, and indicators.
 - 2. Level switches.
 - 3. Alarm indicator light and bell on 6-inch by 6-inch salt-treated post at tank. Alarms at pump station shall be on separate circuit from pumps and controls. Control panel may be located elsewhere per Owners direction
- B. All control equipment shall bear the Underwriters Laboratory label. Main control panel shall be either UL listed or be constructed of UL listed components.
- C. Panel enclosures shall be NEMA 4X enclosures. Enclosure shall be fiberglass.
- D. The control panels shall have:
 - 1. a dead front with separate removable inside panel to protect electrical equipment
 - 2. a lock hasp on outside door (lock to be provided by Owner)

3. a main circuit breaker for pump
4. main circuit breaker for alarm and control circuits, separate from pump
5. separate auxiliary circuit breakers for alarm and control circuits
6. Green run light for pump
7. H-O-A switch for pump
8. alarm switch for On-Off and Test
9. weatherproof outside flashing red alarm light
10. weatherproof outside alarm bell or horn
11. a terminal strip for connecting pumps and controls
12. an elapsed time meter for pump
13. surge arrester to protect against lightning
14. a schematic diagram fixed on the inside of door
15. auto dialer (may be externally located if weatherproof)

E. Level switches shall:

1. be mercury tube switches sealed in a solid polyurethane float.
2. have sealed power cord with weight attached above the float to hold switch in place.
3. be suspended from a stainless steel float bracket through holes provided with rubber snubbers to protect the cord and to hold cord at any set height.
4. set to heights shown on Drawings.

F. Contractor shall provide Owner two sets of operation and maintenance instructions with parts list for each pump station and controls.

G. All wire leads for pumps and floats shall pass through a watertight and gas-tight conduit to the control panel. Conduit shall be of sufficient size to enable all leads to pass through.

H. Auto dialer shall be triggered during alarm conditions. Auto dialer shall be capable of handling at least three (3) phone numbers. Auto dialer shall be capable of recording digitally the emergency message. No recording tape allowed.

2.4 SYSTEM OPERATION

- A. On sump level rise lower mercury switch shall energize, then upper level switch shall energize and start pump. With pump operating, sump level shall lower to low-water level and turn float switch, stopping pump. If sump level continues to rise with pump on, alarm float switch shall energize and signal alarm. All switch levels shall be adjustable from the surface.

2.5 PUMP LIFTING CHAIN

- A. Pump lifting chain shall be of adequate size, stainless steel chain and shall be connected to transfer lifting loads to the pump. Upper end of chain shall be secured at the top of the basin within easy reach from above.

2.5 EMERGENCY PLACARD

- A. An emergency placard shall be placed on the control panel which reads as follows:
"If light is flashing or bell is ringing, call 1-252-925-4170."

PART 3 - EXECUTION

3.1 PUMPS AND CONTROLS

- A. Pump and controls shall be installed in accordance with manufacturer's instructions and all applicable local and state building codes.

3.2 TESTING

- A. Once system pressure head is set, a drawdown test shall be performed. The drawdown shall be measured in gallons per minute and compared to the design flow.
- B. Alarm Test: With power off, fill pump tank with water until level is above alarm float level. Turn power on; alarm light should energize. Pump (single) should energize. Alarm light should de-energize when water level drops below alarm level.
- C. Operate all equipment, floats and controls to ensure proper installation.

END OF SECTION 02741



North Carolina Department of Environment and Natural Resources
Division of Water Quality

Beverly Eaves Perdue
Governor

Coleen H. Sullins
Director

Dee Freeman
Secretary

June 30, 2011

Tommy J. Etheridge, Chairman
Engelhard Sanitary District
PO Box 579
Engelhard, NC 27824

Subject: Permit No. WQ0035444
Engelhard Sanitary District
Hyde County FY 09 CDBG Lake Swamp
Road Sewer
Wastewater Collection System Extension
Hyde County

Dear Mr. Etheridge:

In accordance with your application received June 15, 2011, we are forwarding herewith Permit No. WQ0035444, dated June 30, 2011, to Engelhard Sanitary District for the construction and operation of the subject wastewater collection system extension. This permit shall be effective from the date of issuance, until rescinded, and shall be subject to the conditions and limitations as specified therein. This cover letter shall be considered a part of this permit and is therefore incorporated therein by reference.

Please pay particular attention to Permit Condition 3, which requires that the wastewater collection facilities be properly operated and maintained in accordance with 15A NCAC 2T .0403 or any individual system-wide collection system permit issued to the Permittee.

Permitting of this project does not constitute an acceptance of any part of the project that does not meet 15A NCAC 2T; the Division of Water Quality's (Division) Gravity Sewer Minimum Design Criteria adopted February 12, 1996 as applicable; and the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 as applicable, unless specifically mentioned herein. Division approval is based on acceptance of the certification provided by a North Carolina-licensed Professional Engineer in the application. It shall be the Permittee's responsibility to ensure that the as-constructed project meets the appropriate design criteria and rules. Failure to comply may result in penalties in accordance with North Carolina General Statute §143-215.6A through §143-215.6C, construction of additional or replacement wastewater collection facilities, and/or referral of the North Carolina-licensed Professional Engineer to the licensing board.

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules, and Regulations, permission is hereby granted to Engelhard Sanitary District for the construction and operation of six (6) septic tanks; each with a 20-gallon per minute simplex pump, on-site audible and visual high water alarms, a portable generator receptacle with telemetry, and approximately 200 linear feet of 1.5-inch force main for each of the six (6) existing homes; as well as approximately 1,500 linear feet of 2-inch force main to serve as a collector main of these six connections, as part of the Hyde County FY 09 CDBG Lake Swamp Road Sewer

North Carolina Division of Water Quality
943 Washington Square Mall
Washington, NC 27889

Internet: www.ncwaterquality.org
Phone: (252) 946-8481
FAX: (252) 946-9215

One
North Carolina
Naturally

project, and the discharge of **1,440** gallons per day of collected wastewater into the Engelhard Sanitary District's existing sewerage system, pursuant to the application received June 15, 2011, and in conformity with 15A NCAC 2T; the Division's Gravity Sewer Minimum Design Criteria adopted February 12, 1996 as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 as applicable; and other supporting data subsequently filed and approved by the Department of Environment and Natural Resources and considered a part of this permit.

The sewage and wastewater collected by this system shall be treated in the Engelhard Sanitary District Wastewater Treatment Facility (Non-Discharge Permit No. WQ0017625) prior to being land applied by spray irrigation/drip irrigation/rapid infiltration.

A stormwater management plan shall be submitted to and approved by the Washington Regional Office in accordance with 15A NCAC 2H .1000.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within 30 days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made, this permit shall be final and binding.

If you need additional information concerning this matter, please contact Thom Edgerton at (252) 948-3963 or via E-mail at thom.edgerton@ncdenr.gov.

Sincerely,



For Coleen H. Sullins

cc: Hyde County Health Department
Washington Regional Office, Surface Water Protection Section (Engelhard Sanitary District Collection System)
Michael W. Strader, Jr., PE (Quible & Associates, PC, PO Drawer 870, Kitty Hawk, NC 27949)
PERCS (formerly NDPU) Files

NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
RALEIGH
WASTEWATER COLLECTION SYSTEM EXTENSION PERMIT

This permit shall be effective from the date of issuance until rescinded and shall be subject to the following specified conditions and limitations:

1. This permit shall become voidable unless the wastewater collection facilities are constructed in accordance with the conditions of this permit; 15A NCAC 2T; the Division of Water Quality's (Division) Gravity Sewer Minimum Design Criteria adopted February 12, 1996 as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 as applicable; and other supporting materials unless specifically mentioned herein.
2. This permit shall be effective only with respect to the nature and volume of wastes described in the application and other supporting data.
3. The wastewater collection facilities shall be properly maintained and operated at all times. The Permittee shall maintain compliance with an individual system-wide collection system permit for the operation and maintenance of these facilities as required by 15A NCAC 2T .0403. If an individual permit is not required, the following performance criteria shall be met as provided in 15A NCAC 2T .0403:
 - a. The sewer system shall be effectively maintained and operated at all times to prevent discharge to land or surface waters, and any contravention of the groundwater standards in 15A NCAC 2L .0200 or the surface water standards in 15A NCAC 2B .0200.
 - b. A map of the sewer system shall be developed and shall be actively maintained.
 - c. An operation and maintenance plan shall be developed and implemented.
 - d. Pump stations that are not connected to a telemetry system shall be inspected every day (i.e. 365 days per year). Pump stations that are connected to a telemetry system shall be inspected at least once per week.
 - e. High-priority sewer lines shall be inspected at least once per every six-month period of time.
 - f. A general observation of the entire sewer system shall be conducted at least once per year.
 - g. Inspection and maintenance records shall be maintained for a period of at least three years.
 - h. Overflows and bypasses shall be reported to the appropriate Division regional office in accordance with 15A NCAC 2B .0506(a), and public notice shall be provided as required by North Carolina General Statute § 143-215.1C.
4. This permit shall not be transferable. In the event there is a desire for the wastewater collection facilities to change ownership, or there is a name change of the Permittee, a formal permit request shall be submitted to the Division accompanied by documentation from the parties involved, and other supporting materials

as may be appropriate. The approval of this request shall be considered on its merits and may or may not be approved.

5. Construction of the gravity sewers, pump stations, and force mains shall be scheduled so as not to interrupt service by the existing utilities nor result in an overflow or bypass discharge of wastewater to the surface waters of the State.
6. Per 15A NCAC 2T.0116, upon completion of construction and prior to operation of these permitted facilities, the completed Engineering Certification form attached to this permit shall be submitted with the required supporting documents to the address provided on the form. A complete certification is one where the form is fully executed and the supporting documents are provided as applicable.
7. A copy of the construction record drawings shall be maintained on file by the Permittee for the life of the wastewater collection facilities.
8. Failure to abide by the conditions and limitations contained in this permit; 15A NCAC 2T; the Division's Gravity Sewer Design Criteria adopted February 12, 1996 as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Station and Force Mains adopted June 1, 2000 as applicable; and other supporting materials may subject the Permittee to an enforcement action by the Division, in accordance with North Carolina General Statutes §143-215.6A through §143-215.6C.
9. In the event that the wastewater collection facilities fail to perform satisfactorily, including the creation of nuisance conditions, the Permittee shall take immediate corrective action, including those as may be required by this Division, such as the construction of additional or replacement facilities.
10. The issuance of this permit shall not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (local, state and federal) which have jurisdiction, including but not limited to applicable river buffer rules in 15A NCAC 2B .0200, erosion and sedimentation control requirements in 15A NCAC Ch. 4 and under the Division's General Permit NCG010000, and any requirements pertaining to wetlands under 15A NCAC 2B .0200 and 15A NCAC 2H .0500.
11. **Noncompliance Notification:**

The Permittee shall report by telephone to a water quality staff member at the Washington Regional Office, telephone number 252-946-6481, as soon as possible, but in no case more than 24 hours or on the next working day, following the occurrence or first knowledge of the occurrence of either of the following:

- a. Any process unit failure, due to known or unknown reasons, that renders the facility incapable of adequate wastewater transport, such as mechanical or electrical failures of pumps, line blockage or breakage, etc.; or
- b. Any failure of a pumping station or sewer line resulting in a by-pass directly to receiving waters without treatment of all or any portion of the influent to such station or facility.

Overflows and spills occurring outside normal business hours may also be reported to the Division of Emergency Management at telephone number (800) 858-0368 or (919) 733-3300. Voice mail messages or faxed information shall not be considered as the initial verbal report. Persons reporting any of the above occurrences shall file a spill report by completing and submitting Part I of Form CS-SSO (or the most current Division approved form) within five days following first knowledge of the occurrence. This report must outline the actions taken or proposed to be taken to ensure that the problem does not recur. Part II of Form CS-SSO (or the most current Division approved form) can also be completed to show that the SSO was beyond control.

12. Gravity sewers installed below the minimum required slope per the Division's Gravity Sewer Minimum Design Criteria shall not be acceptable and shall not be certified until corrected. If there is an unforeseen obstacle in the field where all viable solutions have been examined, a slope variance can be requested from the Division with firm supporting documentation. This shall be done through a permit modification with fee. Such variance requests will be evaluated on a case-by-case basis. Resolution of such request shall be evident prior to completing and submitting the construction certification.

Permit issued this the thirtieth day of June, 2011

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



For Coleen H. Sullins, Director

Division of Water Quality

By Authority of the Environmental Management Commission

Permit Number WQ0035444

Permit No. WQ0035444

June 30, 2011

ENGINEER'S CERTIFICATION

Complete and submit this form to the permit issuing office (address below) with the following:

- One copy of the project record drawings (plan/profile views and detail drawings of sewer lines) of the wastewater collection system extension. Final record drawings should be clear on the plans. Record drawings should indicate the design and the marked up changes during construction.
- Supporting design calculations (selected pumps, system curve, operating point, available storage if portable generator(s) or storage greater than longest past three year outage reliability option selected) for any pump stations permitted as part of this project
- Changes to the project should be clearly identified on the record drawings or in written summary form. Permit modifications are required for any changes resulting in non-compliance with this permit, regulations or minimum design criteria. Modifications should be submitted prior to certification.

This project shall not be considered complete nor allowed to operate until this Engineer's Certification and all required supporting documentation have been received by the Division. **Therefore, it is highly recommended that this certification be sent in a manner that provides proof of receipt by the Division.**

ENGINEER'S CERTIFICATION

☐ Partial

☐ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (☐ periodically, ☐ weekly, ☐ full time) the construction of the Hyde County FY 09 CDBG Lake Swamp Road Sewer, Hyde County project, consisting of six (6) septic tanks; each with a 20-gallon per minute simplex pump, on-site audible and visual high water alarms, a portable generator receptacle with telemetry, and approximately 200 linear feet of 1.5-inch force main for each of the six (6) existing homes; as well as approximately 1,500 linear feet of 2-inch force main to serve as a collector of these six connections, for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance of this permit; 15A NCAC 2T; the Division of Water Quality's (Division) Gravity Sewer Minimum Design Criteria adopted February 12, 1996 as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 as applicable; and other supporting materials.

North Carolina Professional Engineer's
seal, signature, and date:

**SEND THIS FORM & SUPPORTING DOCUMENTATION
WITH REQUIRED ATTACHMENTS TO THE FOLLOWING ADDRESS**

**NORTH CAROLINA DIVISION OF WATER QUALITY
WASHINGTON REGIONAL OFFICE – SURFACE WATER PROTECTION SECTION
ATTN: REGIONAL SUPERVISOR
943 WASHINGTON SQUARE MALL
WASHINGTON, NC 27889**

The Permittee is responsible for tracking all partial certifications up until a final certification is received. Any wastewater flow made tributary to the wastewater collection system extension prior to completion of this Engineer's Certification shall be considered a violation of the permit and shall subject the Permittee to appropriate enforcement actions.



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

January 10, 2011

Quible & Associates, P.C.
Attn: Mr. Michael W. Strader, Jr., P.E.
P.O. Drawer 870
Kitty Hawk, NC 27949

County: Hyde

Subject: Approved to Installation of 2" Sanitary Sewer Forcemain with 1.5" Service
Taps on Right of Way of SR 1314 (Lake Swamp Road) in Hyde County

Dear Strader,

Attached for your records is the approved encroachment to install a 2" sanitary sewer forcemain with 1.5" service taps on the right of way of SR 1314 (Lake Swamp Road) in Hyde County. A copy of this encroachment shall be on the project during the installation of this line.

To prevent damage to road pavement surface all open excavation and service tap pits shall be a minimum of Three Feet (3') from the edge of road pavement.

This encroachment shall expire on June 23, 2012 if installation of this line has not started or been completed prior to this date.

Please feel free to call Mr. Phelps at (252) 793-4568 if you have any questions.

Yours truly,

 (c.v.p.)
J.D. Jennings, P.E.

Division Engineer


Carol V. Phelps

Assistant District Engineer

JDJ/cvp

Cc: Mr. J.R. Memory (W/agreement)
Mr. J.D. Jennings, P.E., Division Engineer (W/agreement)
County Maintenance Engineer (W/agreement)
File (W/agreement)

ROUTE SR 1314 (Lake Swamp Road) PROJECT Hyde County (FY09 CDBG) Lake Swamp Road SAN. SEWER FORCE MAIN COUNTY OF STATE OF NORTH CAROLINA Hyde

DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY ENCROACHMENT AGREEMENT
PRIMARY AND SECONDARY HIGHWAYS

-AND-

ENGELHARD SANITARY DISTRICT
TOMMY ETHERIDGE

THIS AGREEMENT, made and entered into this the 22ND day of JUNE 20 11 by and between the Department of Transportation, party of the first part; and Engelhard Sanitary District party of the second part,
Tommy Etheridge

WITNESSETH

THAT WHEREAS, the party of the second part desires to encroach on the right of way of the public road designated as Route(s) 1314 (Lake Swamp Road), located off the intersection of SR 1311 and SR 1314,
approximately 2000 lf north of the intersection US 264 and SR 1311 in Engelhard, NC
with the construction and/or erection of: approximately 1500 lf of 2" diameter sanitary sewer force main, associated 1.5"
diameter residential service laterals, all related appurtenances and connection to the existing 2" diameter sanitary sewer
force main.

WHEREAS, it is to the material advantage of the party of the second part to effect this encroachment, and the party of the first part in the exercise of authority conferred upon it by statute, is willing to permit the encroachment within the limits of the right of way as indicated, subject to the conditions of this agreement;

NOW, THEREFORE, IT IS AGREED that the party of the first part hereby grants to the party of the second part the right and privilege to make this encroachment as shown on attached plan sheet(s), specifications and special provisions which are made a part hereof upon the following conditions, to wit:

That the installation, operation, and maintenance of the above described facility will be accomplished in accordance with the party of the first part's latest POLICIES AND PROCEDURES FOR ACCOMMODATING UTILITIES ON HIGHWAY RIGHTS-OF-WAY, and such revisions and amendments thereto as may be in effect at the date of this agreement. Information as to these policies and procedures may be obtained from the Division Engineer or State Utility Agent of the party of the first part.

That the said party of the second part binds and obligates himself to install and maintain the encroaching facility in such safe and proper condition that it will not interfere with or endanger travel upon said highway, nor obstruct nor interfere with the proper maintenance thereof, to reimburse the party of the first part for the cost incurred for any repairs or maintenance to its roadways and structures necessary due to the installation and existence of the facilities of the party of the second part, and if at any time the party of the first part shall require the removal of or changes in the location of the said facilities, that the said party of the second part binds himself, his successors and assigns, to promptly remove or alter the said facilities, in order to conform to the said requirement, without any cost to the party of the first part.

That the party of the second part agrees to provide during construction and any subsequent maintenance proper signs, signal lights, flagmen and other warning devices for the protection of traffic in conformance with the latest Manual on Uniform Traffic Control Devices for Streets and Highways and Amendments thereto. Information as to the above rules and regulations may be obtained from the Division Engineer of the party of the first part.

That the party of the second part hereby agrees to indemnify and save harmless the party of the first part from all damages and claims for damage that may arise by reason of the installation and maintenance of this encroachment.

That the party of the second part agrees to restore all areas disturbed during installation and maintenance to the satisfaction of the Division Engineer of the party of the first part. The party of the second part agrees to exercise every reasonable precaution during construction and maintenance to prevent eroding of soil; silting or pollution of rivers, streams, lakes, reservoirs, other water impoundments, ground surfaces or other property; or pollution of the air. There shall be compliance with applicable rules and regulations of the North Carolina Division of Environmental Management, North Carolina Sedimentation Control Commission, and with ordinances and regulations of various counties, municipalities and other official agencies relating to pollution prevention and control. When any installation or maintenance operation disturbs the ground surface and existing ground cover, the party of the second part agrees to remove and replace the sod or otherwise reestablish the grass cover to meet the satisfaction of the Division Engineer of the party of the first part.

That the party of the second part agrees to assume the actual cost of any inspection of the work considered to be necessary by the Division Engineer of the party of the first part.

That the party of the second part agrees to have available at the construction site, at all times during construction, a copy of this agreement showing evidence of approval by the party of the first part. The party of the first part reserves the right to stop all work unless evidence of approval can be shown.

Provided the work contained in this agreement is being performed on a completed highway open to traffic; the party of the second part agrees to give written notice to the Division Engineer of the party of the first part when all work contained herein has been completed. Unless specifically requested by the party of the first part, written notice of completion of work on highway projects under construction will not be required.

That in the case of noncompliance with the terms of this agreement by the party of the second part, the party of the first part reserves the right to stop all work until the facility has been brought into compliance or removed from the right of way at no cost to the party of the first part.

That it is agreed by both parties that this agreement shall become void if actual construction of the work contemplated herein is not begun within one (1) year from the date of authorization by the party of the first part unless written waiver is secured by the party of the second part from the party of the first part.

During the performance of this contract, the second party, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor"), agrees as follows:

- a. Compliance with Regulations: The contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the U. S. Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and

made a part of this contract.

- b. **Nondiscrimination:** The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- c. **Solicitations for Subcontracts, including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- d. **Information and Reports:** The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the Department of Transportation, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.
- e. **Sanctions for Noncompliance:** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Department of Transportation shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to,
 - (1) withholding of payments to the contractor under the contract until the contractor complies, and/or
 - (2) cancellation, termination or suspension of the contract, in whole or in part.
- f. **Incorporation of Provisions:** The contractor shall include the provisions of paragraphs "a" through "f" in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Department of Transportation to enter into such litigation to protect the interests of the State, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

R/W (161) : Party of the Second Part certifies that this agreement is true and accurate copy of the form R/W (161) incorporating all revisions to date.

IN WITNESS WHEREOF, each of the parties to this agreement has caused the same to be executed the day and year first above written.

ATTEST OR WITNESS:

Gable & Associates, P.C.
Michael W. Strader, Jr.
John T. Strader

DEPARTMENT OF TRANSPORTATION

BY:

Tommy Etheridge
DIVISION ENGINEER

Engelhard Sanitary District

Tommy Etheridge

Second Party

INSTRUCTIONS

When the applicant is a corporation or a municipality, this agreement must have the corporate seal and be attested by the corporation secretary or by the empowered city official, unless a waiver of corporate seal and attestation by the secretary or by the empowered City official is on file in the Raleigh office of the Manager of Right of Way. In the space provided in this agreement for execution, the name of the corporation or municipality shall be typed above the name, and title of all persons signing the agreement should be typed directly below their signature.

When the applicant is not a corporation, then his signature must be witnessed by one person. The address should be included in this agreement and the names of all persons signing the agreement should be typed directly below their signature.

This agreement must be accompanied, in the form of an attachment, by plans or drawings showing the following applicable information:

1. All roadways and ramps.
2. Right of way lines and where applicable, the control of access lines.
3. Location of the existing and/or proposed encroachment.
4. Length, size and type of encroachment.
5. Method of installation.
6. Dimensions showing the distance from the encroachment to edge of pavement, shoulders, etc.
7. Location by highway survey station number. If station number cannot be obtained, location should be shown by distance from some identifiable point, such as a bridge, road, intersection, etc. (To assist in preparation of the encroachment plan, the Department's roadway plans may be seen at the various Highway Division Offices, or at the Raleigh office.)
8. Drainage structures or bridges if affected by encroachment (show vertical and horizontal dimensions from encroachment to nearest part of structure).
9. Method of attachment to drainage structures or bridges.
10. Manhole design.
11. On underground utilities, the depth of bury under all traveled lanes, shoulders, ditches, sidewalks, etc.
12. Length, size and type of encasement where required.
13. On underground crossings, notation as to method of crossing - boring and jacking, open cut, etc.
14. Location of vents.

GENERAL REQUIREMENTS

1. Any attachment to a bridge or other drainage structure must be approved by the Head of Structure Design in Raleigh prior to submission of encroachment agreement to the Division Engineer.
2. All crossings should be as near as possible normal to the centerline of the highway.
3. Minimum vertical clearances of overhead wires and cables above all roadways must conform to clearances set out in the National Electric Safety Code.
4. Encasements shall extend from ditch line to ditch line in cut sections and 5' beyond toe of slopes in fill sections.
5. All vents should be extended to the right of way line or as otherwise required by the Department.
6. All pipe encasements as to material and strength shall meet the standards and specifications of the Department.

7. Any special provisions or specifications as to the performance of the work or the method of construction that may be required by the Department must be shown on a separate sheet attached to encroachment agreement provided that such information cannot be shown on plans or drawings.
8. The Department's Division Engineer should be given notice by the applicant prior to actual starting of installation included in this agreement.

COUNTY: HYDE
DATE: JUNE 22, 2011
ROUTE: SR 1314

SPECIAL PROVISIONS

INSTALLATION OF 2" SANITARY SEWER FORCEMAIN LINE WITH 1.5" SERVICE TAPS ON R/W OF SR 1314 (LAKE SWAMP ROAD) IN HYDE COUNTY

1. District Engineer Darrick S. Lee, P.E. must be notified by telephone at (252) 793 – 4568, 8:00 a.m. – 5:00 p.m., Monday – Friday, three (3) days prior to beginning work. Failure to give such notification may result in stoppage of work for a period of three (3) days.
2. Written notification of the completion of the encroachment contract will be given to:
**Mr. Darrick S. Lee, P.E.
District Engineer
Division of Highways
1300 US Hwy 64 West
Plymouth, N.C. 27962**
3. An executed copy of this encroachment agreement shall be present at the construction site at all times during construction. NCDOT reserves the right to stop all work unless evidence of approval can be shown. If safety or traffic conditions warrant such action, NCDOT reserves the right to further limit, restrict or suspend operations within the right of way.
4. The Department of Transportation does not guarantee the right of way on this road, nor will it be responsible for any claim brought by any property owner by reason of the installation.
5. **NCDOT WORK ZONE TRAFFIC CONTROL QUALIFICATION AND TRAINING PROGRAM**

Effective July 1, 2010 all flagging operations within NCDOT Right of Way require qualified and trained Work Zone Flaggers.

Effective July 1, 2011, qualified and trained Work Zone Traffic Control Supervisors will be required on Significant Projects.

Training for this certification is provided by NCDOT approved training sources and private entities that have been pre-approved to train themselves. If you have questions, contact our web site at www.ncdot.org/-wztc, or contact Stuart Bourne, P.E. with NCDOT Work Zone Traffic Control Unit at (919) 250-4159 or sbourne@ncdot.gov.
6. The Encroaching party agrees to provide traffic control devices, lane closures, positive protection devices necessary for the safety of road users during construction and any subsequent maintenance. This shall be performed in conformance with the latest **NCDOT Roadway Standard Drawings and Standard Specifications for roads and structures** and Amendments or supplements thereto. When there is no guidance provided in the Roadway Drawings or Specifications, comply with the **Manual on Uniform Traffic Control Devices for Streets and Highways** and amendments or Supplements thereto. Information as to the above rules and regulations may be obtained from the Division Engineer of the party of the first
7. The traveling public will be warned of the encroachment construction with signing that is in accordance with the latest Manual on Uniform Traffic Control Devices (MUTCD).
8. Two – way traffic must be maintained at all times.

9. All materials and workmanship shall conform to the N.C. Department of Transportation's *Standards and Specifications* manuals.
10. Work shall not begin until after the traffic control and erosion control devices have been installed to the satisfaction of the District Engineer.
11. The Contractor shall comply with all OSHA requirements and provide a competent person on site to supervise excavation at all times.
12. Strict compliance with the Policies and Procedures for Accommodating Utilities on Highway Rights of Way manual shall be required.
13. Any drainage structure disturbed or damaged shall be restored to its original condition as directed by the District Engineer.
14. During non-working hours, equipment shall be parked as close to the right of way line as possible and be properly barricaded in order not to have any equipment obstruction within the Clear Recovery Area.
15. Drainage structures shall not be blocked with excavation materials.
16. Well covers and pads shall be of the traffic bearing types approved by NCDOT for use within highway Rights of Way.
17. No trenches shall be left open or unsafe overnight.
18. Fill areas/backfill shall be compacted to 95% density.
19. Adjacent utility owners must be contacted in advance of construction activities to coordinate adjustments and/or relocations.
20. All trash and debris generated as a result of work associated with this encroachment shall immediately be removed from the right of way and disposed of in accordance with all local, state and Federal laws.
21. Any root(s), etc. protruding above grade as a result of any construction activity associated with this encroachment shall be removed at a sufficient depth to allow routine maintenance of the right of way.
22. All earth areas disturbed shall be re-graded and re-seeded in accordance with the Division of Highways standards and specifications.
23. The encroaching party shall comply with all applicable federal, state, and local environmental regulations, and shall obtain all necessary federal, state, and local environmental permits, including but not limited to, those related to sediment control, stormwater, wetland, streams, endangered species, and historical sites.
24. Excavation for utility and service tap pits shall be no closer than THREE FEET (3') from edge of road pavement surface.
25. Seeding and Mulching (Eastern NC Mix)
The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined by the Engineer. All rates are in pounds per acre.

All Roadway Areas

March 1 - August 31

50#	Tall Fescue
5#	Centipede
25#	Bermudagrass (hulled)*
500#	Fertilizer
4000#	Limestone

September 1 - February 28

50#	Tall Fescue
5#	Centipede
35#	Bermudagrass (unhulled)*
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*Optional: 35# Bahiagrass may be substituted for Bermudagrass only upon Engineer's request.

Waste and Borrow Locations

January 1 – December 31

75# Tall Fescue
50# Bahia
500# Fertilizer
4000# Limestone

Approved Tall Fescue Cultivars:

Adventure	Adventure II	Amigo	Anthem
Apache	Apache II	Arid	Austin
Brookstone	Bonanza	Bonanza II	Chapel Hill
Chesapeake	Chieftain	Coronado	Crossfire II
Debutante	Duster	Falcon	Falcon II
Finelawn Petite	Finelawn	Finelawn I	Genesis
Grande	Guardian	Hounddog	Jaguar
Jaguar III	Kentucky 31	Kitty Hawk	Monarch
Montauk	Mustang	Olympic	Pacer
Phoenix	Pixie	Pyramid	Rebel
Rebel, Jr.	Rebel II	Renegade	Safari
Shenandoah	Tempo	Titan	Tomahawk
Trailblazer	Tribute	Vegas	Wolfpack
Wrangler			

All areas seeded and mulched shall be tacked with asphalt. Crimping of straw in lieu of asphalt tack shall not be allowed on this project.

On cut and fill slopes 2:1 or steeper add 30# Sericea Lespedeza January 1 – December 31.

Fertilizer shall be 10-20-20 analysis. Upon written approval of the Engineer, a different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis.

Temporary Seeding:

Fertilizer shall be the same analysis as specified for "Seeding and Mulching" and applied at the rate of 400 pounds per acre and seeded at the rate of 50 pounds per acre. German Millet or Browntop Millet shall be used in summer months and Rye Grain during the remainder of the year. The Engineer will determine the exact dates for using each kind of seed.

Fertilizer Topdressing:

Fertilizer used for topdressing on all roadway areas shall be 10-20-20 grade and shall be applied at the rate of 500 pounds per acre. Upon written approval of the Engineer, a different analysis of fertilizer may be used provided the 2-1-1 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as 16-8-8 analysis.

Supplemental Seeding:

The kinds of seed and proportions shall be the same as specified for "Seeding and Mulching", with the exception that no centipede seed will be used in the seed mix for supplemental seeding. The rate of application for supplemental seeding may vary from 25# to 75# per acre. The actual rate per acre will be determined by the Engineer prior to the time of topdressing and the contractor will be notified in writing of the rate per acre, total quantity needed, and areas on which to apply the supplemental seed. Minimum tillage equipment, consisting of a sod seeder shall be used for incorporating seed into the soil as to prevent disturbance of existing vegetation. A clodbuster (ball and chain) may be used where degree of slope prevents the use of sod seeder.

Mulching:

Crimping Straw Mulch:

Crimping shall be required on this project adjacent to any sections of roadway where traffic is to be maintained or allowed during construction. In areas within six feet of the edge of pavement, straw is to be applied and then crimped. **After the crimping operation is complete, an additional application of straw shall be applied and immediately tacked with a sufficient amount of undiluted emulsified asphalt.**

Straw mulch shall be of sufficient length and quality to withstand the crimping operation.

Crimping equipment including power source shall be subject to the approval of the Engineer providing that maximum spacing of crimper blades shall not exceed 8 inches.



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

July 1, 2011

Quible & Associates, P.C.
Attn: Mr. Michael W. Strader, Jr., P.E.
P.O. Drawer 870
Kitty Hawk, NC 27949

County: Hyde

Subject: Approved to Install 6" Potable Water Line with 3/4" Service Taps on Right of Way of SR 1314 (Lake Swamp Road) and Intersection with SR 1311 in Hyde County

Dear Strader,

Attached for your records is the approved encroachment to install a 6" potable water line with 3/4" service taps on the right of way of SR 1314 (Lake Swamp Road) with directional bore under SR 1311 for tie-in to existing 6" water line in Hyde County. A copy of this encroachment shall be on the project during the installation of this line.

To prevent damage to road pavement surface all open excavation and service tap pits shall be a minimum of Three Feet (3') from the edge of road pavement.

This encroachment shall expire on July 2, 2012 if installation of this line has not started or been completed prior to this date.

Please feel free to call Mr. Phelps at (252) 793-4568 if you have any questions.

Yours truly,

A handwritten signature in cursive script, reading "J.D. Jennings".

J.D. Jennings, P.E.
Division Engineer

A handwritten signature in cursive script, reading "Carol V. Phelps".

Carol V. Phelps
Assistant District Engineer

JDJ/cvp

Cc: Mr. J.R. Memory (W/agreement)
Mr. J.D. Jennings, P.E., Division Engineer (W/agreement)
County Maintenance Engineer (W/agreement)
File (W/agreement)

ROUTE SR 1314 (Lake Swamp Road) PROJECT Hyde County (FY09 CDBG) Lake Swamp Road Potable Water COUNTY OF Hyde STATE OF NORTH CAROLINA
LINE BY SERVICE TAPS

DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY ENCROACHMENT AGREEMENT

-AND-
HYDE COUNTY PUBLIC UTILITIES
CLINT BERRY

PRIMARY AND SECONDARY HIGHWAYS

THIS AGREEMENT, made and entered into this 28th day of June 20 11 by and between the Department of Transportation, party of the first part; and Hyde County Public Utilities
Clint Berry party of the second part,

WITNESSETH

THAT WHEREAS, the party of the second part desires to encroach on the right of way of the public road designated as Route(s) 1314 (Lake Swamp Road), located off the intersection of SR 1311 and SR 1314,
approximately 2000 ft north of the intersection US 284 and SR 1311 in Engelhard, NC
with the construction and/or erection of: approximately 1835 ft of 6" diameter potable water supply lines, two post hydrants,
all related appurtenances and connection to the existing 6" diameter water line located on the east side of SR 1311.

WHEREAS, it is to the material advantage of the party of the second part to effect this encroachment, and the party of the first part in the exercise of authority conferred upon it by statute, is willing to permit the encroachment within the limits of the right of way as indicated, subject to the conditions of this agreement;

NOW, THEREFORE, IT IS AGREED that the party of the first part hereby grants to the party of the second part the right and privilege to make this encroachment as shown on attached plan sheet(s), specifications and special provisions which are made a part hereof upon the following conditions, to wit:

That the installation, operation, and maintenance of the above described facility will be accomplished in accordance with the party of the first part's latest POLICIES AND PROCEDURES FOR ACCOMMODATING UTILITIES ON HIGHWAY RIGHTS-OF-WAY, and such revisions and amendments thereto as may be in effect at the date of this agreement. Information as to these policies and procedures may be obtained from the Division Engineer or State Utility Agent of the party of the first part.

That the said party of the second part binds and obligates himself to install and maintain the encroaching facility in such safe and proper condition that it will not interfere with or endanger travel upon said highway, nor obstruct nor interfere with the proper maintenance thereof, to reimburse the party of the first part for the cost incurred for any repairs or maintenance to its roadways and structures necessary due to the installation and existence of the facilities of the party of the second part, and if at any time the party of the first part shall require the removal of or changes in the location of the said facilities, that the said party of the second part binds himself, his successors and assigns, to promptly remove or alter the said facilities, in order to conform to the said requirement, without any cost to the party of the first part.

That the party of the second part agrees to provide during construction and any subsequent maintenance proper signs, signal lights, flagmen and other warning devices for the protection of traffic in conformance with the latest Manual on Uniform Traffic Control Devices for Streets and Highways and Amendments or Supplements thereto. Information as to the above rules and regulations may be obtained from the Division Engineer of the party of the first part.

That the party of the second part hereby agrees to indemnify and save harmless the party of the first part from all damages and claims for damage that may arise by reason of the installation and maintenance of this encroachment.

That the party of the second part agrees to restore all areas disturbed during installation and maintenance to the satisfaction of the Division Engineer of the party of the first part. The party of the second part agrees to exercise every reasonable precaution during construction and maintenance to prevent eroding of soil, silting or pollution of rivers, streams, lakes, reservoirs, other water impoundments, ground surfaces or other property, or pollution of the air. There shall be compliance with applicable rules and regulations of the North Carolina Division of Environmental Management, North Carolina Sedimentation Control Commission, and with ordinances and regulations of various counties, municipalities and other official agencies relating to pollution prevention and control. When any installation or maintenance operation disturbs the ground surface and existing ground cover, the party of the second part agrees to remove and replace the sod or otherwise reestablish the grass cover to meet the satisfaction of the Division Engineer of the party of the first part.

That the party of the second part agrees to assume the actual cost of any inspection of the work considered to be necessary by the Division Engineer of the party of the first part.

That the party of the second part agrees to have available at the construction site, at all times during construction, a copy of this agreement showing evidence of approval by the party of the first part. The party of the first part reserves the right to stop all work unless evidence of approval can be shown.

Provided the work contained in this agreement is being performed on a completed highway open to traffic; the party of the second part agrees to give written notice to the Division Engineer of the party of the first part when all work contained herein has been completed. Unless specifically requested by the party of the first part, written notice of completion of work on highway projects under construction will not be required.

That in the case of noncompliance with the terms of this agreement by the party of the second part, the party of the first part reserves the right to stop all work until the facility has been brought into compliance or removed from the right of way at no cost to the party of the first part.

That it is agreed by both parties that this agreement shall become void if actual construction of the work contemplated herein is not begun within one (1) year from the date of authorization by the party of the first part unless written waiver is secured by the party of the second part from the party of the first part.

During the performance of this contract, the second party, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor"), agrees as follows:

- a. Compliance with Regulations: The contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the U. S. Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

- c. Solicitations for Subcontracts, including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- d. Information and Reports: The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the Department of Transportation, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.
- e. Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Department of Transportation shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to,
- (1) withholding of payments to the contractor under the contract until the contractor complies, and/or
- (2) cancellation, termination or suspension of the contract, in whole or in part.
- f. Incorporation of Provisions: The contractor shall include the provisions of paragraphs "a" through "f" in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Department of Transportation to enter into such litigation to protect the interests of the State, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

RW (161) : Party of the Second Part certifies that this agreement is true and accurate copy of the form RW (161) incorporating all revisions to date.

IN WITNESS WHEREOF, each of the parties to this agreement has caused the same to be executed the day and year first above written.

ATTEST OR WITNESS:

Julie B. Carawan
Asst. to County Manager
6-21-11

DEPARTMENT OF TRANSPORTATION

BY:

James D. Jennings (O.P.)
DIVISION ENGINEER

Hyde County Public Utilities

Clint Berry

Second Party

INSTRUCTIONS

When the applicant is a corporation or a municipality, this agreement must have the corporate seal and be attested by the corporation secretary or by the empowered city official, unless a waiver of corporate seal and attestation by the secretary or by the empowered city official is on file in the Raleigh office of the Manager of Right of Way. In the space provided in this agreement for execution, the name of the corporation or municipality shall be typed above the name, and title of all persons signing the agreement should be typed directly below their signature.

When the applicant is not a corporation, then his signature must be witnessed by one person. The address should be included in this agreement and the names of all persons signing the agreement should be typed directly below their signature.

This agreement must be accompanied, in the form of an attachment, by plans or drawings showing the following applicable information:

1. All roadways and ramps.
2. Right of way lines and where applicable, the control of access lines.
3. Location of the existing and/or proposed encroachment.
4. Length, size and type of encroachment.
5. Method of installation.
6. Dimensions showing the distance from the encroachment to edge of pavement, shoulders, etc.
7. Location by highway survey station number. If station number cannot be obtained, location should be shown by distance from some identifiable point, such as a bridge, road, intersection, etc. (To assist in preparation of the encroachment plan, the Department's roadway plans may be seen at the various Highway Division Offices, or at the Raleigh office.)
8. Drainage structures or bridges if affected by encroachment (show vertical and horizontal dimensions from encroachment to nearest part of structure).
9. Method of attachment to drainage structures or bridges.
10. Manhole design.
11. On underground utilities, the depth of bury under all traveled lanes, shoulders, ditches, sidewalks, etc.
12. Length, size and type of encasement where required.
13. On underground crossings, notation as to method of crossing - boring and jacking, open cut, etc.
14. Location of vents.

GENERAL REQUIREMENTS

1. Any attachment to a bridge or other drainage structure must be approved by the Head of Structure Design in Raleigh prior to submission of encroachment agreement to the Division Engineer.
2. All crossings should be as near as possible normal to the centerline of the highway.
3. Minimum vertical clearances of overhead wires and cables above all roadways must conform to clearances set out in the National Electric Safety Code.
4. Encasements shall extend from ditch line to ditch line in cut sections and 5' beyond toe of slopes in fill sections.
5. All vents should be extended to the right of way line or as otherwise required by the Department.
6. All pipe encasements as to material and strength shall meet the standards and specifications of the Department.
7. Any special provisions or specifications as to the performance of the work or the method of construction that may be required by the Department must be shown on a separate sheet attached to encroachment agreement provided that such information cannot be shown on plans or drawings.
8. The Department's Division Engineer should be given notice by the applicant prior to actual starting of installation included in this agreement.

COUNTY: HYDE
DATE: JUNE 28, 2011
ROUTE: SR's 1311 & 1314

SPECIAL PROVISIONS

***INSTALLATION OF 6" POTABLE WATER LINE WITH 3/4" SERVICE TAPS AND
APPURTENANCES ON R/W OF SR's 1311 & 1314 (LAKE SWAMP ROAD) IN HYDE COUNTY***

1. District Engineer Darrick S. Lee, P.E. must be notified by telephone at (252) 793 – 4568, 8:00 a.m. – 5:00 p.m., Monday – Friday, three (3) days prior to beginning work. Failure to give such notification may result in stoppage of work for a period of three (3) days.
2. Written notification of the completion of the encroachment contract will be given to:
**Mr. Darrick S. Lee, P.E.
District Engineer
Division of Highways
1300 US Hwy 64 West
Plymouth, N.C. 27962**
3. An executed copy of this encroachment agreement shall be present at the construction site at all times during construction. NCDOT reserves the right to stop all work unless evidence of approval can be shown. If safety or traffic conditions warrant such action, NCDOT reserves the right to further limit, restrict or suspend operations within the right of way.
4. The Department of Transportation does not guarantee the right of way on this road, nor will it be responsible for any claim brought by any property owner by reason of the installation.
5. **NCDOT WORK ZONE TRAFFIC CONTROL QUALIFICATION AND TRAINING PROGRAM**

Effective July 1, 2010 all flagging operations within NCDOT Right of Way require qualified and trained Work Zone Flaggers.

Effective July 1, 2011, qualified and trained Work Zone Traffic Control Supervisors will be required on Significant Projects.

Training for this certification is provided by NCDOT approved training sources and private entities that have been pre-approved to train themselves. If you have questions, contact our web site at www.ncdot.org/-wztc, or contact Stuart Bourne, P.E. with NCDOT Work Zone Traffic Control Unit at (919) 250-4159 or sbourne@ncdot.gov.
6. The Encroaching party agrees to provide traffic control devices, lane closures, positive protection devices necessary for the safety of road users during construction and any subsequent maintenance. This shall be performed in conformance with the latest **NCDOT Roadway Standard Drawings and Standard Specifications for roads and structures and Amendments or supplements thereto**. When there is no guidance provided in the Roadway Drawings or Specifications, comply with the **Manual on Uniform Traffic Control Devices for Streets and Highways** and amendments or Supplements thereto. Information as to the above rules and regulations may be obtained from the Division Engineer of the party of the first
7. The traveling public will be warned of the encroachment construction with signing that is in accordance with the latest Manual on Uniform Traffic Control Devices (MUTCD).
8. Two – way traffic must be maintained at all times.

9. All materials and workmanship shall conform to the N.C. Department of Transportation's *Standards and Specifications* manuals.
10. Work shall not begin until after the traffic control and erosion control devices have been installed to the satisfaction of the District Engineer.
11. The Contractor shall comply with all OSHA requirements and provide a competent person on site to supervise excavation at all times.
12. Strict compliance with the Policies and Procedures for Accommodating Utilities on Highway Rights of Way manual shall be required.
13. Any drainage structure disturbed or damaged shall be restored to its original condition as directed by the District Engineer.
14. During non-working hours, equipment shall be parked as close to the right of way line as possible and be properly barricaded in order not to have any equipment obstruction within the Clear Recovery Area.
15. Drainage structures shall not be blocked with excavation materials.
16. All frames, covers and pads/collars within highway Rights of Way shall be traffic bearing types approved by NCDOT.
17. No trenches shall be left open or unsafe overnight.
18. Fill areas/backfill shall be compacted to 95% density.
19. Adjacent utility owners must be contacted in advance of construction activities to coordinate adjustments and/or relocations.
20. All trash and debris generated as a result of work associated with this encroachment shall immediately be removed from the right of way and disposed of in accordance with all local, state and Federal laws.
21. Any root(s), etc. protruding above grade as a result of any construction activity associated with this encroachment shall be removed at a sufficient depth to allow routine maintenance of the right of way.
22. All earth areas disturbed shall be re-graded and re-seeded in accordance with the Division of Highways standards and specifications.
23. The encroaching party shall comply with all applicable federal, state, and local environmental regulations, and shall obtain all necessary federal, state, and local environmental permits, including but not limited to, those related to sediment control, stormwater, wetland, streams, endangered species, and historical sites.
24. Excavation for utility and service tap pits shall be no closer than THREE FEET (3') from edge of road pavement surface.
25. Seeding and Mulching (Eastern NC Mix)
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Straw mulch shall be of sufficient length and quality to withstand the crimping operation.

Crimping equipment including power source shall be subject to the approval of the Engineer providing that maximum spacing of crimper blades shall not exceed 8 inches.

APPENDIX D

The Water System Expansion Permit shall become a part of the contract documents. A copy will be provided to the Contractor prior to contract award.

